Commonwealth Of Massachusetts
All Hazards Disaster Debris Management Plan

REVISION # 5

Annex to the State Comprehensive Emergency Management Plan

APPENDICES

Massachusetts Emergency Management Agency

8.0 APPENDICES

Appendix A: Disaster Debris Management Resources: Web Links

Appendix B: United States Army Corps of Engineers (USACE) Debris Modeling Methodology

Appendix C: Western Massachusetts Intergovernmental Emergency Mutual Aid Agreement

Appendix D: Federal Emergency Management Agency (FEMA) Mutual Aid Agreement Example

Appendix E: FEMA Right of Entry Agreement Example

Appendix F: USACE Sample Scope of Work for Equipment Leasing for Clearing of Debris

Appendix G: USACE Sample Scope of Work for Debris Reduction Site Management

Appendix H: USACE Sample Unit Price Debris Removal Scope of Work

Appendix I: New Orleans Sample Diagram of Curbside Collection Separation

Appendix J: Animal Carcass Management

Appendix K: MA Master Service Agreements; HLS02, HLS03

Appendix L: FEMA Alternative Procedures Pilot Program

Appendix A: Disaster Debris Management Resources: Web Links

Massachusetts Disaster Debris Management Resources

MassDEP's *Disaster Debris Management Planning: An Introduction for Local Government Officials:* *http://www.mass.gov/eea/agencies/massdep/recycle/regulations/waste-and-recycling-policies-and-guidance.html#3*

Massachusetts Compost Sites List: http://www.mass.gov/eea/docs/dep/recycle/actcomp.pdf

Massachusetts Handling Facility, Transfer Stations, and Construction and Demolition Processors List:
http://www.mass.gov/eea/docs/dep/recycle/acthf.pdf

Massachusetts Landfills List: http://www.mass.gov/eea/docs/dep/recycle/acthf.pdf

Massachusetts Combustion Facilities List: http://www.mass.gov/eea/docs/dep/recycle/actcf.pdf

Massachusetts Inactive or Closed Landfills List:
hhttp://www.mass.gov/eea/docs/dep/recycle/solid/inactlf.pdf

Finding Recycling Facilities and Resources in Massachusetts
http://www.recyclingworksma.com/find-a-recycler/

Federal Emergency Management Agency (FEMA)

FEMA Debris Management Main Site: Includes in-depth guidance on developing a debris management plan, FEMA policies and factsheets, and other guidance on conducting debris operations according to FEMA reimbursement requirements:
http://www.fema.gov/public-assistance-local-state-tribal-and-non-profit/debris-management-guide

FEMA's updated Public Assistance: Debris Management Guide 325 (DMG325):
http://www.fema.gov/pdf/government/grant/pa/demagde.pdf http://www.fema.gov/public-assistance-local-state-tribal-and-non-profit/debris-management-guide

(Note: Appendices to the DMG (pp 153-260) include FEMA forms for tracking labor and equipment, monitoring fhttp://www.fema.gov/region-i-ct-me-ma-nh-ri-vtorms, Debris Collection and Management Site Hazard Analysis, Demolition Checklist, and Policies and Fact-sheets on various aspects of debris management.)

FEMA Public Assistance Pilot Website – provides guidance on the FEMA Public Assistance Pilot Program: http://www.fema.gov/alternative-procedures

FEMA Regional contacts:
http://www.fema.gov/region-i-ct-me-ma-nh-ri-vt

US Army Corps of Engineers

Corps of Engineers Emergency Response Portal:
http://www.usace.army.mil/missions/emergencyoperations/nationalresponseframework.aspx

US Environmental Protection Agency (US EPA)

EPA's *Planning for Disaster Debris* manual highlights planning for debris cleanup, including lessons learned from communities experienced in disaster recovery:
http://www.epa.gov/garbage/disaster/dstr-pdf.pdf

EPA's website provides specific advice and assistance about planning for disaster debris cleanup:
http://www.epa.gov/wastes/conserve/imr/cdm/pubs/pndd.pdf

EPA special guidance on managing Asbestos Containing Materials in the course of building demolition following a large-scale disaster:
http://www.epa.gov/katrina/debris.html

EPA information on construction and demolition (C&D) debris recycling:
http://www.epa.gov/epaoswer/non-hw/debris-new/disaster.htm

EPA national listing of approved refrigerant (freon) recyclers:
http://www.epa.gov/ozone/title6/608/reclamation/reclist.html

Other Federal Agencies

Occupational Safety and Health Administration (OSHA) eMatrix provides guidance on how to keep workers safe during disaster debris cleanup/management (Note: more people are typically injured during cleanup than during disasters):
http://www.osha.gov/SLTC/etools/hurricane/index.html

Federal Highway Administration Emergency Relief Program - information on federal reimbursement for repair of disaster-damaged federally funded highways:
http://www.fhwa.dot.gov/programadmin/erelief.cfm

Other State/Local Plans

Franklin County Massachusetts Disaster Debris Management Planning Document 2009:
http://www.frcog.org/pubs/emergency/Debris_Management_Action_Plan_Draft_Jan_1_2009.pdf

Connecticut Department of Environmental Protection Local Government Debris Management Memo:
http://www.ct.gov/deep/lib/deep/waste_management_and_disposal/debris_management/disasterdebrismanagementplan.pdf

Alameda County Disaster Debris Management Plan – an excellent regional plan for the county and its 17 cities with a strong emphasis on policies and methodologies for recycling, reusing, and otherwise diverting disaster debris from disposal
http://www.stopwaste.org/docs/d-plan.pdf

Appendices to this plan include useful forms and tools for debris management; electronic copies may be requested by calling (510) 891-6500

Disaster Debris Management – Planning Tools, report to EPA Region IV, 1999 – contains disaster debris management case studies with details on debris quantities, management logistics, and lessons learned in efforts to optimize recycling
http://www.cece.ucf.edu/about/faculty/reinhart/research/DDfinalreport.pdf

Public Outreach Materials

Brief print and recorded public service announcements produced by US EPA as guidance for Katrina victims on health hazards/precautions for hurricane and flood damage:
http://www.epa.gov/katrina/outreach/psa.html

Includes generic PSAs on the following topics:

- asbestos and lead
- carbon monoxide
- children and flood water
- cleaning up sediment
- flood water
- flooding and lead-based paint
- gas leaks
- hazardous materials
- household cleaners
- mold
- protective gear
- private wells and flood water
- septic systems

These same PSAs are provided in Spanish at:
http://www.epa.gov/katrina/outreach/psa_espanol.html

Pierce County, OR Debris Recycling Issues to Consider – helpful tips on disaster debris recycling options and effective ways to engage the public in diversion
http://www.co.pierce.wa.us/index.aspx?nid=1590

Other Resources

National Demolition Association listing of demolition contractors in New England:
http://207.150.194.71/nda_criteria.aspx

Electronics Industry Alliance listing of electronics recyclers in MA:
http://www.eiae.org/index.php?state=MA

The Construction Materials Recycling Association lists MA and other state recyclers for Construction/Demolition wastes at: http://www.cdrecycling.org/find-a-c-d-recycler

National Recycling Network C&D Recycling webpage with numerous resources:
http://www.wastemiser.com/resources.html

Whole Building Design Guide website lists 6 MA companies that accept C&D material, land-clearing debris, soils, and other materials in their Construction Waste Management Database at
http://www.wbdg.org/tools/cwm.php

General recycling information for other demolition materials is available for:

Concrete at http://www.concreterecycling.org (but has no company info listed)
Asphalt shingles at http://www.shinglerecycling.org
Drywall at http://www.drywallrecycling.org
Mixed metals at:

- Institute of Scrap Recycling Industries at http://www.isri.org

Steel Recycling Institute at http://www.recycle-steel.org
Automotive Recyclers Association at http://www.a-r-a.org

Resources for Residents

State of Florida's "*Hurricane Retrofit Guide*" helps the public prepare their homes for hurricane winds and is available at http://www.floridadisaster.org/hrg/

FEMA's Homeowner checklist for avoiding hurricane damage is available at
http://www.fema.gov/pdf/plan/prevent/nhp/hurdam.pdf

State of California's "*Homeowner Guide to Earthquake Safety*"is available at
http://www.seismic.ca.gov/hog.htm

American Red Cross flyers for a wide variety of disaster hazards/precautions are available at
http://www.redcross.org/prepare/disaster

American Red Cross flyer for avoiding flood damage is at
http://www.tallyredcross.org/library/AvoidingFloodDamage.pdf

FEMA homeowner's checklist to prepare for wildfires is available at
http://www.fema.gov/pdf/hazard/wildfire/wdfrdam.pdf

Red Cross guidance for preparing for wildfires is at:
http://www.redcross.org/prepare/disaster/wildfire

Appendix B: Corps of Engineers Debris Modeling Methodology

CORPS OF ENGINEERS DEBRIS MODELING METHODOLOGY

The modeling methodology described below was developed by the Corps of Engineers Emergency Management staff using actual data from Hurricanes Frederick, Hugo, and Andrew. The estimates produced by the model are predicated to have an accuracy of ± 30% (accuracy is limited due to the many variables inherit to the debris removal process). The primary factor the model utilizes to estimate storm generated debris is the total number of households in a developed urban/suburban area. Other factors utilized are cubic yards of debris generated per household per storm category, vegetative cover, commercial density, and precipitation. The household debris includes debris generated from damage to the house including contents and surrounding shrubs/trees. Vegetative cover includes all trees /shrubbery and other debris located on public rights of way. Commercial density includes debris generated by damage to businesses and industrial facilities. The majority of commercial related debris will be removed by private contractors; however disposal/reduction space is still required. The amount of precipitation generated by a storm has a direct relationship on debris quantities. Very wet storms will cause ground saturation increasing tree fall.

For planning purposes, the worst case scenario should be used, with one storm category for the subject area. For actual events the wind speeds will vary and more accurate debris estimates can be determined by detailed analysis. The most accurate process to determine the defined areas is by using Doppler Radar (National Weather Service Broadcasts) and GIS (Geographical Information Systems). The Doppler radar will define the storm's intensity and the exact track of the "EYE" of the storm in relation to the affected area. By tracking the storm and plotting the eye path and 5 mile wide bands out from the eye, defined areas and estimated wind speeds can be determined. The wind speed of the eye wall normally determines the reported storm category with the outward or five mile bands being a lesser category. The storm then can be tracked inland until the winds speeds dissipate below hurricane strength. The areas now outlined can be divided by storm category. Once divided, coordinates can be entered into GIS to determine areas and demographic information such as population, schools, businesses required by the model to calculate debris quantities.

ESTIMATING DEBRIS QUANTITIES

Determine population (**P**) in the affected area (for example, 1990 census data for Harrison County, MS is 165,500). Therefore, for Harrison Co, **P** = 165,500. Population density per square mile can also be used to determine debris estimates per square mile.

The assumption of three persons per household (**H**) is used for this model. Known/estimated population (**P**) for a jurisdiction may be used to determine a value for **H**.
H =**P** / 3

The formula used in this model will generate debris quantity as an absolute value based on a known/estimated population or as a debris quantity per square mile based upon population density per square mile.

The model formula is: **Q** = **H** (**C**) (**V**) (**B**) (**S**)

Where

Q is quantity of debris in cubic yards
H is the number of households
C is the storm category factor in cubic yards
V is the vegetation characteristic multiplier
B is the commercial/business/industrial use multiplier
S is the storm precipitation characteristic multiplier

C is the storm category factor. It expresses debris quantity in cubic yards (cy) per household by hurricane category and includes the house and its contents, and land foliage.

Hurricane Category	Value of **C** Factor
1	2 cy
2	8 cy
3	26 cy
4	50 cy
5	80 cy

V is the vegetation multiplier. It acts to increase the quantity of debris by adding vegetation including shrubbery and trees on public rights of way.

Vegetative Cover	Value of **V** Multiplier
Light	1.1
Medium	1.3
Heavy	1.5

B is the multiplier which takes into account areas which are not solely single-family residential, but includes small retail stores, schools, apartments, shopping centers and light industrial/manufacturing facilities. Built into this multiplier is the offsetting commercial insurance requirement for owner/operator salvage operations.

Commercial Density	Value of Multiplier
Light	1.0
Medium	1.2
Heavy	1.3

S is a precipitation multiplier that takes into account either a "wet" or "dry" storm event; in a "wet" storm trees will up-root generating a larger volume of storm generated debris (for category III or greater storms only).

Precipitation Characteristic	Value of Multiplier
None to Light	1.0
Medium to heavy	1.3

Example: A category 4 storm passes through Harrison County, Mississippi. The area is primarily single family dwellings with some apartment complexes, schools and shopping centers. Vegetation characteristic is heavy due to the presence of residential landscape shrubbery and trees throughout the area. The storm is a very wet storm with rain before and continuing for a few days after the wind pass.

Q = **H** (**C**) (**V**) (**B**) (**S**)

H =**P**/3 = 165,500 / 3 = 55,167 (3 persons/household)
C = 50 (factor for a Category 4 storm)
V = 1.5 (multiplier for heavy vegetation)
B = 1.3 (multiplier for heavy commercial due to schools/stores/apartments)
S = 1.3 (multiplier for wet storm event)

then **Q** = 55,167 (50) (1.5) (1.3) (1.3) = 6,992,374 cy debris or **7 Million CY**

DEBRIS MANAGEMENT SITE REQUIREMENTS

Current Corps guidance for debris management (storage/handling) sites is to estimate stack heights of 10 feet with 60% usage of land area to provide for roads, safety buffers, burn pits, HTW areas etc.

1 acre (ac) = 4,840 sq yd (sy)
10 feet stack height = 3.33 yards
total volume per ac = 4,849 sy/ac (3.33 y) = 16,133 cy/ac

From the example above, the acreage required for debris reduction sites is:

7,000,000 cy / 16,133 cy/ac = 434 acres required for debris storage only, no buffers, etc.

To provide for roads, buffers, etc., the acreage must be increased by a factor of 1.66 or divided by 60%:

434 x 1.66 = **720 acres**

or, since one square mile (sm) = 640 acres

720 acres / 640 ac/sm = 1.12 square miles

If you assume a 100 acre reduction site can be cycled every 45 to 60 days, or one time during the recovery period, then, 720/ 2 = 360 acres or **four 100 acre sites would be required**. The number of sites varies with size, distance from source, speed of reduction (mixed debris is slower than clean woody debris) and removal urgency. If existing landfill space is not readily available to start reducing site volumes immediately, additional sites will be required. Publicly owned property should be considered first, then pre-designated leases with land owners as an alternative. Pre-designation of sites is critical for expediting initial debris removal operations.

The Corps commonly removes approximately 70% of the total volume generated with local governments, volunteer groups, and private individuals removing the remainder.
If 7 million cy is estimated, the Corps would estimate removing approximately 70% or 4.9 million cy.

The debris removed will consist of two broad categories: clean woody, and construction and demolition (C&D) debris. The clean debris will come early in the removal process as residents and local governments clear yards and rights of ways. The debris removal mission can be facilitated if debris is segregated as much as possible at the origin, i.e, along the Right of Way, according to type. The public should be informed regarding debris segregation as soon as possible after the storm. The most effective process is to set time periods for removal, i.e, the first 7-10 days clean woody debris only, and then followed by all other debris, segregating the metals from the non-metals.

Most common hurricane generated debris will consist of the following:

30% Clean woody debris
70% Mixed C&D
of the 70% mixed C&D,
- 42% Burnable but requires sorting (and advance approval from MassDEP Regions)
- 5% Soil
- 15% Metals
- 38% Land filled

Based on the example above, 7,000,000 cy would break down as follows:

2,100,000 cy Clean woody debris
4,900,000 cy Mixed C&D
of the 4,900,000 cy of mixed C&D,
- 2,058,000 cy is Burnable but requires sorting or land filling
- 245,000 cy of Soil
- 735,000 cy of Metals
- 1,862,000 cy Land filled

Burning will produce about 95% reduction. Of less environmental concern than burning is the use of chippers and/or tub grinders. The chips/mulch produced has agricultural value as well as

being easily converted to pelletized fuel. Chipping and grinding reduces the debris volume on a 1 to 4 ratio (4 cy is reduced to 1cy) or by 75%. The rate of burning versus chipping/grinding is basically equal, about 200 cy/hr. However chipping requires on-site storage and disposal of the chips/mulch.

Appendix C: Western Massachusetts Intergovernmental Emergency Mutual Aid Agreement

This Mutual Aid Agreement ("Agreement") is entered into by and between the following cities and towns: (list all cities and towns that have signed the agreement)

Section 1: Purpose

The purpose of this Agreement is to provide for mutual aid and assistance between the municipalities entering into the Agreement to provide services to prevent and combat the effects of a mass casualty incident or emergency and disasters as defined in Chapter 639 of the Acts of 1950 when a local emergency has been declared and local resources are insufficient to meet this unusual need.

The safety and well being of a community will best be protected through the concerted efforts of multiple governments providing assistance to one another. The promotion and coordination of this assistance through this Agreement is desirable for the effective and efficient provision of mutual aid and assistance.

Section 2: Authority

The Agreement is intended for use in an emergency situation, "in the light of exigencies of an extreme emergency situation" as excerpted from Chapter 639 of the Acts of 1950, as codified under Mass Gen. Laws. C. 33, appendix and other relevant State and local laws and policies. In addition, pursuant to M.G.L. Chapter 40, Section 4A, mutual aid agreements may be made among municipalities or municipal agencies, with the authorization of the City Council and Mayor in a city, and of Town Meeting in a town.

Section 3: Definitions

Mutual Aid means aid to another local government in the form of personnel, equipment, facilities, services, supplies, or other resources appropriate to public safety and welfare.

Inter-municipal refers to the surrounding local governments participating in this mutual aid agreement.

Receiving Government means the local government requesting mutual aid from another local government.

Sending Government means the local government sending mutual aid to another local government.

Section 4: Other Agreements

This Agreement supersedes prior past mutual aid agreements or inter-municipal agreements

among the signatories of this Agreement, except for the Berkshire, Franklin, Hamden and Hampshire Counties Fire and Police Mutual Aid Agreements and the State Fire Mobilization Agreements which are not superseded by this agreement.

This Agreement does not limit any municipalities' ability to enter into mutual aid agreements in the future.

Section 5: Requests for Assistance

In order to request mutual aid pursuant to this Agreement, the receiving Government must declare a local emergency as defined in Chapter 639 of the Acts of 1950 and then request mutual aid from the Sending Government.

Section 6: Limitations

The provision of mutual aid is voluntary. Neither the Sending nor Receiving Government shall be required to deplete its own resources.

Section 7: Supervision and Control

Personnel and equipment dispatched to a Receiving Government shall remain employees of their respective Sending Government, but shall work under the overall discretion of the Receiving Government.

The Receiving Government will utilize the incident command system and responding resources from Sending Government(s) will be incorporated as appropriate into that system.

Section 8: Powers and Rights

Employees of the Sending Government agencies that are parties to this Intergovernmental Mutual Aid Agreement shall be granted recognition of their respective jurisdiction, authority, licenses or permits outside their original jurisdiction under this Intergovernmental Mutual Aid Agreement.

Section 9: Liability

The Sending Government will maintain workers compensation coverage for its employees and liability coverage for its vehicles and equipment. Any uninsured or extraordinary expenses may be part of a claim for reimbursement. The Receiving Government agrees to maintain adequate liability insurance or be self-insured and to hold harmless and indemnify the Sending Government for any and all claims occurring while its personnel and equipment are working under the direction of the Receiving Government. These indemnities shall include legal fees and costs that may arise from providing emergency aid pursuant to this Agreement, to the extent permissible under Massachusetts General Laws.

Section 10: Workers Compensation

The Sending Government will maintain workers compensation coverage for its employees and liability coverage for its vehicles and equipment. Any uninsured or extraordinary expenses may be part of a claim for reimbursement. The Receiving Government agrees to maintain adequate liability insurance or be self-insured and to hold harmless and indemnify the Sending Government for any and all claims occurring while its personnel and equipment are working under the direction of the Receiving Government. These indemnities shall include legal fees and costs that may arise from providing emergency aid pursuant to this Agreement, to the extent permissible under Massachusetts General Laws.

Section 11: Reimbursement

Hourly rates, equipment costs, and hours worked by those providing Emergency mutual aid will be provided to the Receiving Government for all actual costs. The Sending Government providing emergency mutual aid may request reimbursement for all actual costs. The Receiving Government agrees to promptly process and pay actual costs to the Sending Government providing emergency mutual aid based on customary and good practices not withstanding potential reimbursements from State or Federal emergency relief programs.

Section 12: Implementation

The purpose of these recitals is to insure that the Sending Government is reimbursed all specified and reasonable costs and assumes no additional liabilities as a result of the Agreement. The Sending Government and its designee shall determine the manner and degree in which such emergency mutual aid is utilized.

During the performance of this Agreement, the Receiving Government agrees as follows:

The Receiving Government will not discriminate against any client or applicant for services because of race, color, religion, sex, age, sexual orientation, disability, family status or national origin. The Receiving Government will take affirmative action to ensure that clients, applicants and employees are treated without regard to their race, color, religion, sex, age, sexual orientation, disability, family status or national origin.

In the event of the Receiving Government's noncompliance with the nondiscrimination clauses of this Agreement or with any of such rules, regulations, or orders, this Agreement may be canceled, terminated, or suspended in whole or in part and the Receiving Government may be declared ineligible to participate in any further emergency mutual aid Agreements.

The Receiving Government further covenants that in the performance of this Agreement, they do not have any interest, direct or indirect, which will conflict in any manner or degree with the performance of the emergency mutual aid hereunder.

This Agreement shall be governed by the law of the Commonwealth of Massachusetts unless otherwise specified. Any action, whether at law or equity, shall be brought only in the Superior

Court of the county in which the complaining municipality resides, or the Federal District Court sitting in Springfield, Massachusetts.

Both the Sending Government and the Receiving Government shall comply with all applicable rules and regulations promulgated by all local, state, federal and national boards, bureaus and agencies.

Section 13: Term of Agreement

This Agreement represents the entire and integrated Agreement between the LOCAL GOVERNMENTS THAT HAVE SIGNED THIS AGREEMENT (list on pages attached) and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by all the LOCAL GOVERNMENTS THAT HAVE SIGNED THIS AGREEMENT (list on pages attached).

This Agreement is to remain in effect for twenty-five years from the date of execution, at which time it may be extended in accordance with Massachusetts law. Any party may withdraw from this Agreement at any time by sending fourteen (14) days' prior written notice to all other parties. This Agreement shall continue to be in effect among the remaining parties.

Section 14: Severability

This Agreement may be amended only by written instrument signed by all the LOCAL GOVERNMENTS THAT HAVE SIGNED THIS AGREEMENT (list on pages attached).

Should any portion of this Agreement be judged to be invalid by any court of competent jurisdiction, such judgment shall not impair or invalidate the remainder of this Agreement, and for this purpose the provisions of this Agreement are declared severable?

Signature page(s) for **Western Massachusetts Intergovernmental Emergency Mutual Aid Agreement**

List all 101 communities in western Massachusetts

[City/Town] of _____

By:_____ Date: _____
[Title and Agency--print]

By:_____ Date: _____
[Signature]

Signatures
Continued…

[Recommend to add as exhibits, documents reflecting the votes or authorizations for each municipality to join the agreement]

Check your local charter, ordinances, or bylaws for signature requirements. Local laws may require a different form of approval than what is given here, so you may need to make appropriate changes. We strongly advise that your city or town attorney review the Agreement.

Appendix D
FEMA Mutual Aid Agreement Example

INTERGOVERNMENTAL EMERGENCY MUTUAL AID AGREEMENT

STATE OF _____

CITY / COUNTY _____ and CITY / COUNTY _____

WHEREAS, Massachusetts General Law c40, s. 4a, authorizes local governments to contract with each other to provide services, and

WHEREAS, Massachusetts General Law c40, s. 4a, and state policy also provide for certain reimbursements or financial aid to local government for certain natural disasters or emergency conditions declared by the Governor, and

WHEREAS, the _____ finds it to be in its best interest to have such mutual aid agreements
(City or County Name)
with other local governmental bodies in the state and region,

NOW, THEREFORE, in consideration of the above recitals and the covenants contained herein, the parties hereto agree as follows:

1. The _____ hereby agrees to provide through its Director of Public Works such mutual
(City or County Name)
aid as may be requested by a governmental unit, which has emergency conditions of a natural disaster as defined by Massachusetts law. The aid rendered shall be to the extent of available personnel and equipment not required for minimum needs of the _____. The judgment of the Director of Public Works or his designee (City or County Name)
shall be final as to the personnel and equipment so available.

2. Personnel dispatched to aid another jurisdiction shall remain employees of the _____ but
(City or County Name)
shall work under the supervision of the Director of Public Works of the requesting jurisdiction. The _____retains the right to withdraw any and all aid rendered upon direction of the
(City or County Name)
Director of Public Works.

3. The Director of Public Works will provide a list of hourly rates and equipment costs, and hours worked for all such aid rendered to the requesting jurisdiction for all actual costs, and the requesting jurisdiction agrees to compensate such claim for costs incurred as expeditiously as possible.

4. The _____ will maintain workers compensation coverage for its employees and
(City or County Name)
liability coverage for its vehicles and equipment. Any uninsured or extraordinary expenses may be a part of

claimed costs for reimbursement. The requesting jurisdiction agrees to maintain adequate liability insurance under state law and to hold harmless and indemnify the _____ for any and all
(City or County Name)
claims occurring while its personnel and equipment are working under the direction of the Director of Public Works of the requesting jurisdiction. These indemnities shall include attorney's fees and costs that may arise from providing aid pursuant to this agreement.

5. The purpose of these recitals is to insure that the _____ is reimbursed all costs
(City or County Name)
and assumes no additional liabilities as a result of this agreement. Neither party to this agreement shall be liable for its failure or refusal to render aid pursuant to this agreement. The Director of Public Works (or his/her designee in charge of operations) of the requesting jurisdiction shall in his sole discretion determine the manner in which such emergency aid may be used.

IN WITNESS WHEREOF, this Agreement has been duly executed by the parties subscribed below and is binding upon the _____ and the requesting jurisdiction.
(City/County)

Date signed _____

CITY / COUNTY OF _____ by: _____

Date signed _____

REQUESTING JURISDICTION _____by: _____

Appendix E
FEMA Right of Entry Agreement Example

I/We _____, the owner(s) of the property

commonly identified as _____,
(street)
_____, _____, State of_____
(city/town) (county)

do hereby grant and give freely and without coercion, the right of access and entry to said property in the

County/City of _____, its agencies, contractors, and subcontractors thereof, for the purpose of removing and clearing any or all storm-generated debris of whatever nature from the above described property.

It is fully understood that this permit is not an obligation to perform debris clearance. The undersigned

agrees and warrants to hold harmless the City/County of _____, State of _____, its agencies, contractors, and subcontractors, for damage of any type, whatsoever, either to the above described property or persons situated thereon and hereby release, discharge, and waive any action, either legal or equitable that might arise out of any activities on the above described property. The property owner(s) will mark any storm damaged sewer lines, water lines, and other utility lines located on the described property.

I/We (have_____, have not_____) (will_____, will not_____) received any compensation for debris removal from any other source including Small Business Administration (SBA), National Resource Conservation Service (NRCS), private insurance, individual and family grant program or any other public assistance program. I will report for this property any insurance settlements to me or my family for debris removal that has been performed at government expense.

For the considerations and purposes set forth herein, I set my hand this ____day of_____, 20_____.

_____ _____
Witness Owner

_____
Owner

_____
Street Address

_____
City State Zip

_____
Telephone No.

Appendix F: USACE Sample Scope of Work for Equipment Leasing for Clearing of Debris

SCOPE OF WORK
FOR
EQUIPMENT LEASING FOR CLEARING OF DEBRIS
RELATED TO
[NAME/NATURE OF DISASTER]
AT, IN, OR NEAR
[LOCATION OF RECOVERY EFFORTS]

1. **GENERAL.**

1.1 The purpose of this contract is to provide debris clearing and removal response assistance to [LOCATION; I.E. "North Carolina counties" or "Mobile and Baldwin Counties in Alabama"] which have been declared disaster areas by the President because of the effects of [NAME OF DISASTER].

2. SERVICES.

2.1. The Contractor shall provide specified equipment, with operators and laborers, for debris removal. The contractor shall provide all labor and materials necessary to fully operate and maintain (including fuel, oil, grease and repairs) the following:

[INSERT QUANTITY AND DESCRIPTION FROM EQUIPMENT PICK LIST]

2.2. The Contractor shall provide the crews for [INITITIAL TIME; I.E. "two weeks" or "not to exceed either time or dollar amount"] with a Government option to extend for up to an additional [EXTENSION TIME; I.E. "one week"].

2.3. All hourly equipment rates include the cost of the operator, supervision, maintenance, fuel, repairs, overhead, profit, insurance, and any other costs associated with the equipment and personnel.

2.4. All hourly manpower rates include the cost of protective clothing (to include hard-hats and steel-toed boots), fringe benefits, hand tools, supervision, transportation and any other costs.

2.5. The work shall consist of clearing and removing any and all "eligible" debris (see section 3.0 for a definition of eligible debris) as directed by the Contracting Officer's Representative (COR). Work will include: 1) loading the debris, 2) hauling the debris to an approved dumpsite, and 3) dumping the debris at the dumpsite. Ineligible debris will not be loaded, hauled, or dumped under this contract. This work will involve primarily clearing the right-of-way (ROW) of streets and roads.

2.6. The Contractor shall not move from one designated work area to another designated work area without prior approval from the COR.

2.7. The Contractor shall conduct the work so as not to interfere with the disaster response and recovery activities of Federal, State, tribal and local governments or agencies, or of any public utilities.

2.8. The Contractor shall comply with local, tribal, State and Federal Safety and Health Requirements.

3. **DEBRIS CLASSIFICATION**

3.1. **Eligible Debris.** Debris that is within the scope of this contract falls under three possible classifications: Burnable, Non-Burnable, and Recyclable. Debris that is classified as Household Hazardous Waste (HHW) is not to be transported by this contract.

3.2 **Burnable Debris.** Burnable debris includes all biodegradable matter except that included in the following definitions of other categories of debris. It includes, but is not limited to, damaged and disturbed trees; bushes and shrubs; broken, partially broken and severed tree limbs; tree stumps with base cut measurements less than 2 feet; untreated structural timber; untreated wood products; and brush.

3.3. **Non-Burnable Debris.** Non-burnable debris includes, but is not limited to, treated timber; plastic; glass; rubber products; metal products; dry wall cloth items; non-wood building materials; carpeting; recyclable debris including metal products (i.e. mobile trailer parts, household appliances (white metal), and similar items), or uncontaminated soil.

3.4. **Household Hazardous Waste (HHW).** Household hazardous wastes, such as petroleum products, paint products, etc., and known or suspected hazardous materials, such as asbestos, lead-based paint, or electrical transformers shall be removed by others. Coordination for hazardous debris removal is the responsibility of the Government.

4. **DUMPSITES**

4.1. The Contractor shall use only debris dumpsites designated and approved by the COR.

4.2. The dumpsite operator shall direct all dumping operations. The Contractor shall cooperate with the dumpsite operator to facilitate effective dumping operations.

5. **PERFORMANCE SCHEDULE**

5.1. The Contractor shall commence mobilization immediately upon award of the contract and designation of work areas by the COR and will commence debris removal operations within 24 hours of Notice to Proceed.

5.2. The Contractor shall work during daylight hours for [INSERT] hours per day, [INSERT] days per week.

6. **EQUIPMENT**

6.1. All trucks and other equipment must be in compliance with all applicable Federal, State, tribal and local rules and regulations. Any truck used to haul debris must be capable of rapidly dumping its load without the assistance of other equipment; be equipped with a tailgate that will effectively contain the debris during transport and permit the truck to be filled to capacity; and measured and marked for its load capacity. Sideboards or other extensions to the bed are allowable, provided they meet all applicable rules and regulations, cover the front and both sides, and are constructed in a manner to withstand severe operating conditions. The sideboards are to be constructed of 2" by 6" boards or greater and not to extend more than 2 feet above the metal bedsides. The Contracting Officer's representative must approve all requests for extensions. Equipment will be inspected prior to its use by the Contractor using applicable U.S. Army Corps of Engineers forms. The forms will be provided to the Government after completion.

6.2. Trucks and other heavy equipment designated for use under this contract shall be equipped with two signs, one attached to each side. A total of [QUANTITY] signs will be provided by the Government and are to be returned to the Government prior to issuance of final payment. A fee of $[AMOUNT] will be accessed against the final payment for each lost sign.

6.3. Prior to commencing debris removal operations, the Contractor shall present to the Government's representative all trucks or trailers that will be used for hauling debris for the purpose of determining hauling capacity. Hauling capacity, in cubic yards, will be recorded and marked on each truck or trailer. Each truck or trailer will also be numbered for

identification. The government reserves the right to re-measure trucks and trailers at any time during the contract and to use re-measurements as the basis for calculating loads for payment purposes.

6.4. Trucks or equipment that are designated for use under this contract shall not be used for any other work during the working hours of this contract. The Contractor shall not solicit work from private citizens or others to be performed in the designated work area during the period of this contract. Under no circumstances will the Contractor mix debris hauled for others with debris hauled under this contract.

7. REPORTING

7.1. The Contractor shall submit a report to the COR by close of business each day of the term of the contract. Each report shall contain, at a minimum, the following information:

Contractor's Name.
Contract Number.
Daily and cumulative hours for each piece of equipment.
Daily and cumulative hours for personnel, by position.

8. OTHER CONSIDERATIONS

8.1. The Contractor shall supervise and direct the work, using qualified labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, personnel, taxes and fees necessary to perform under the terms of this contract.

8.2. The Contractor must be duly licensed in accordance with the state's statutory requirements to perform the work. The Contractor shall obtain all permits necessary to complete the work. The Contractor shall be responsible for determining what permits are necessary to perform under the contract. Copies of all permits shall be submitted to the COR prior to issuance of a notice to proceed.

8.3. The Contractor shall be responsible for taking corrective action for any notices of violations issued as a result of the Contractors or any sub-contractors actions or operations during the performance of this contract. Corrections for any such violations shall be at no additional cost to the Government.

8.4. The Contractor shall be responsible for control of pedestrian and vehicular traffic in the work area. The Contractor shall provide all flag persons, signs, equipment and other devices necessary to meet Federal, State, tribal and local requirements. The traffic control personnel and equipment shall be in additional to the personnel and equipment required in other parts of this contract. At a minimum, one flag person should be posted at each approach to the work area.

9. PAYMENT.

9.1. The Contractor will be entitled to invoice for 60% of the mobilization and demobilization line item after all equipment is delivered to the designated work site. The remaining 40% will be due after all equipment is removed from the work site, all vehicle signs have been returned to the government, and the contractor has submitted a proper invoice.

9.2. Payment for work completed will be based on verified hours worked from the daily operational report. Equipment down time resulting from equipment failure, routine maintenance and fueling that exceeds fifteen (15) minutes of a work hour will be considered unacceptable work and non-payment for one half of that hour and the number of work hours will be reduced to exclude the down time (the minimum reduction shall be one-half hour).

9.3. All payments made under this contract will be in accordance with PAYMENTS clauses located in other sections of this contract.

10. OPTIONS

10.1 The option items listed in Schedule B (the bid Schedule) are for the purpose of extending this contract for 7 days at a time. These options will be exercised at the discretion of the Government in accordance with the OPTION TO EXTEND SERVICES clause located elsewhere in this contract.

11. **ATTACHMENTS**.

11.1 Daily Report Format
11.2 Sample Bidding Schedule
11.3 Operations Report
11.4 Equipment Pick List

DAILY REPORT						
CONTRACTOR: CONTRACT NO. :					DATE OF REPORT:	
Truck No.		Capacity	Burn site trips	C.Y. Totals	Landfill trips	C.Y. Totals
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
	DAILY GRAND TOTALS			C.Y.		C.Y.

BIDDING SCHEDULE					
ITEM	**DESCRIPTION**	**HOURS**	**U/I**	**U/P**	**AMOUNT**
001	Mobilize Equipment/Demobilize Equipment	JOB			
002	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
003	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
004	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			

005	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
006	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
007	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
008	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
009	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
010	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
011	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
012	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
013	One (1) Truck, Dump, 16-20 cy capacity, with Operator	140.00			
014	One (1) Loader, Front-end, 3-5 cy capacity, with Operator	140.00			
015	One (1) Loader, Front-end, 3-5 cy capacity, with Operator	140.00			
016	One (1) Knuckleboom, 10 ton lifting capacity, with Operator	140.00			
017	Four (4) Laborers with Chainsaws, 16”min bar, traffic flags, and misc. small tools (axes, shovels, safety equip.)	140.00			
018	One (1) Truck, Pickup, ½-1 Ton, with crew foreman, and cellular phone.	140.00			
019	One (1) Track Hoe, 2-3 yd ^{3} bucket with operator	100.00			
020	One (1) Low Bed Equipment Trailer , 20 Ton capacity, and Tractor Truck with operator	70.00			
		TOTAL			

BIDDING SCHEDULE					
ITEM	**DESCRIPTION**	**HOURS**	**U/I**	**U/P**	**AMOUNT**
	FIRST OPTION PERIOD				
021	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
022	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
023	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
024	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
025	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			

026	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
027	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
028	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
029	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
030	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
031	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
032	One (1) Truck, Dump, 16-20 cy capacity, with Operator	70.00			
033	One (1) Loader, Front-end, 3-5 cy capacity, with Operator	70.00			
034	One (1) Loader, Front-end, 3-5 cy capacity, with Operator	70.00			
035	One (1) Knuckleboom, 10 ton lifting capacity, with Operator	70.00			
036	Four (4) Laborers with Chainsaws, 16”min bar, traffic flags, and misc. small tools (axes, shovels, safety equip.)	70.00			
037	One (1) Truck, Pickup,1/2 -1 Ton, with crew foreman, and cellular phone.	70.00			
038	One (1) Track Hoe, 2-3 yd ^{3} bucket, with operator	50.00			
039	One (1) Low Bed Equipment Trailer, 20 Ton capacity, and Tractor Truck, with operator	35.00			
		TOTAL			

OPERATIONAL REPORT CONTRACT

NO. _____

EQUIPMENT	TOTAL HOURS WORKED THIS DAY	TOTAL HOURS IDLE THIS DAY
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
DUMP TRUCK #		
F.E. LOADER#		
F.E. LOADER#		
DOZER #		
TRACK HOE #		
KNUCKLEBOOM #		
KNUCKLEBOOM #		
KNUCKLEBOOM #		
PICKUP TRUCK #		
LABOR CREW #		

EQUIPMENT PICK LIST

ITEM	PICTURE	DESCRIPTION	LIKE
1.		Truck, Pickup, .5/.75 Ton, with Operator	Ford F-150
2.		Truck, Dump, 6-8 cy capacity, with Operator	
3.		Truck, Dump, 16-20 cy capacity, with Operator	GMC C-Series Trucks
4.		Truck, Dump, 25-30 cy capacity, with Operator	
5.		Excavator, Hydraulic, 1-2 cy bucket, 128 Net Hp, with Operator	CAT 320 CASE 9030B
6.		Excavator, Hydraulic, 2-3 cy bucket, 168 Net Hp, with Operator	CAT 325
7.		Excavator, Hydraulic, 3-5 cy bucket , 286 Net Hp, with Operator	CAT 350
8.		Knuckleboom, 10 ton lifting capacity, with Operator	Barko 160A
9.		Attachment, Grapple, hydraulically operated clam-type bucket with 360-degree rotation, for use in demolition, and clearing	

10.		Attachment, Grapple, thumb, a demolition or trash grapple. Can be used with the standard excavator bucket. Thumb section can be stiff arm mounted or controlled with a hydraulic cylinder.	
11.		Attachment, Clamp, Bucket	
12.		Loader, tracked, 1-2 cy blade capacity, with Operator	CAT 933
13.		Loader, tracked, 2-3 cy blade capacity, with Operator	CAT 953
14.		Loader, tracked, 3-5 cy blade capacity, with Operator	CAT 973
15.		Loader, Front-end, wheeled, 3-5 cy capacity, with Operator	CASE 821B CAT 938F
16.		Loader, Front-end, 3-5 cy capacity, with Operator	CAT 960F
17.		Loader, Front-end, 3-5 cy capacity, with Operator	CAT 970F CASE 921B
18.		Rake, Loader with top clamp	
19.		Attachment, Loader Rake, mounts in place of the bucket on 4-wheel drive or crawler loaders. Loads debris at truck height. Long curved teeth for maximum load capacity. Bucket cylinder controls positions for digging depth or transporting.	
20.		Grader, Motor, 12-foot blade, 130-140 net Hp	CAT 12H Champion 710 Series IV
21.		Dozer, tracked, 1-2 cy Blade Capacity, with Operator	CAT D5
22.		Dozer, tracked, 2-3 cy Blade Capacity, with Operator	CAT D7G

23.		Dozer, tracked, 22'6" Blade length, 405 Net Hp, with Operator	Caterpillar D9R
24.		Rake, Clearing and Stacking, Dozer mounted; lighter-weight construction. Curved teeth lift and stack trees and debris while sifting out dirt.	
25.		Chainsaw, not less than 20" bar, with Operator	
26.		Chainsaw, Gas engine, not less than 14" bar, with Operator	
27.		Backhoe, with loader, 1 cy bucket, with Operator	CASE 4-390
28.		Backhoe, with loader, 1.5 cy bucket, with Operator.	JCB 217 4WD
29.		Attachment, Thumb	
30.		Attachment, Clamshell bucket	
31.		Skidder,	
32.		Loader, Mini, Width of vehicle not to exceed 6 feet, for use in restricted maneuver area.	Bobcat 553 JCB 165
33.		Burner, Air Curtain, fully self-contained system that includes a power plant, hydraulic drive system blower fan and fuel tank. A diesel injection system and/or a propane ignition system are offered as light-up options.	Air Burners, Inc. Model "S"

34.		Burner, Air Curtain, mobile unit, 6 cylinder diesel engine, minimum 89 HP (66 kW), full enclosure; burn container 4" (102 mm) thick walls; refractory panels filled with thermal ceramic material. Instrument panel, tachometer, hour meter, ampere meter, key switch, oil pressure and water temperature gauges, with safety shutdown feature and adjustable locking throttle, minimum 15,500 cfm (439 m3/min). Centrifugal fan, air output approx. 165 MPH (266 km/h) at fan, 110 MPH (177 km/h) at air spouts. Manifold minimum 1/8" (3.2 mm) steel, solid-weld assembly; air vents inject air at 20-degree angle to maintain proper air curtain. Length: 35' (10.70 m); 2 sections: 15' (4.60 m) each; T-section at 5' (1.50 m). Weight approx. 7,200 lbs. (3,266 kg). 50 gallons (189 liter) minimum fuel tank capacity. Air quality meets or exceeds applicable US-EPA regulations.	Air Burners, Inc. Mobile System Model "T- 359"
35.		Grinder, Tub, with 300-400 Hp engine, 8 ft diameter tub	Portec Model 20900
36.		Laborer, with hand tools (i.e. shovels, axes, rakes, traffic-control flags, etc)	

Appendix G: USACE Sample Scope of Work for Debris Reduction Site Management

SCOPE OF WORK
FOR
SITE MANAGEMENT FOR DEBRIS REDUCTION
RELATED TO
[NAME/NATURE OF DISASTER]
AT, IN, OR NEAR
[LOCATION OF RECOVERY EFFORTS]

1.0 GENERAL

1.1 The purpose of this contract is to provide site management and reduction of debris generated as a result of [NAME OF DISASTER] in [DISASTER LOCATION; I.E. "North Carolina counties" or "Mobile and Baldwin Counties in Alabama"] which have been declared disaster areas by the President because of the effects of [NAME OF DISASTER].

1.2 The Contractor shall manage and operate the debris reduction site located at [SITE LOCATION]. The site is approximately [SIZE] acres in total area. An outline of the site location is shown in the attached map.

1.3 Contractor shall provide all management, supervision, labor, machines, tools and equipment necessary to accept process, reduce, incinerate and dispose of disaster related debris. The debris to be processed consists primarily of burnable debris, with variable amounts of non-burnable included. Segregation of debris into various categories will be required.

1.4 Reduction of burnable debris shall be through air curtain incineration. [INCLUDE OR DELETE NEXT TWO SENTENCES] Reduction of burnable debris may also be accomplished through chipping/grinding. Reduction by this means, however, 1) must be at the same rate as indicated for incineration, and 2) disposal of the chips/mulch would be the responsibility of the Contractor, and 3) shall be done at no increased cost to the Government.

2.0 SERVICES

2.1 Contractor will establish lined temporary storage areas for ash, household hazardous waste, fuels and other materials that can contaminate soils, runoff or groundwater. Contractor shall set up plastic liners under stationary equipment such as generators and mobile lighting plants unless otherwise directed by the Contracting Officer's Representative (COR).

2.2 Contractor shall be responsible for establishing site layout.

2.3 Contractor will be responsible for traffic control, dust control, erosion control, fire protection, on-site roadway maintenance, and safety measures. The Contractor shall comply with local, tribal, State and Federal safety and health requirements.

2.4 Contractor shall manage the site to accept debris collected under other contracts. Contractor shall direct traffic entering and leaving the site, and shall direct dumping operations at the site.

2.5 Contractor shall be responsible for sorting and stockpiling of debris at the site. Debris shall be segregated into 1) burnable debris, 2) non-burnable debris, 3) household hazardous waste, and 4) ash residue. Further segregation of non-burnable debris, such as recyclable material or durable goods may be necessary. Debris classifications are defined in Section 3.0.

2.6 Contractor shall be responsible for disposal of non-burnable debris and ash residue. Non burnable debris and ash shall be hauled to [NAME OF SITE OR LANDFILL, *NOTE: SITE MUST HAVE SCALES.*] for disposal. [SELECT ONE OF THE FOLLOWING SENTENCES] Tipping fees will be [PRICE PER TON] and will be the responsibility of the contractor for payment. [OR] Tipping fees will be the responsibility of the government. Removal of household hazardous waste from the reduction site, including loading of household hazardous waste at the site, will be performed under a

separate contract.

2.7 Upon completion of the debris reduction process, the Contractor will clear the site of all debris (excluding household hazardous waste) and restore the site to the satisfaction of the COR. The Contractor shall conduct the work so as not to interfere with the disaster response and recovery activities of Federal, State, tribal and local governments or agencies, or of any public utilities.

3.0 DEBRIS CLASSIFICATION

3.1 **Eligible Debris.** Debris that is within the scope of this contract falls under three possible classifications Burnable, Non-Burnable and Household Hazardous Waste.

3.2 **Burnable Debris.** Burnable debris includes all biodegradable matter except that included in the following definitions of other categories of debris. It includes, but is not limited to, damaged and disturbed trees; bushes and shrubs; broken, partially broken and severed tree limbs; untreated structural timber; untreated wood products and brush.

3.3 **Non-Burnable Debris.** Non-burnable debris includes, but is not limited to, treated timber; plastic; glass; rubber products; metal products; sheet rock; cloth items; non-wood building materials and carpeting. Some non-burnable debris is recyclable. Recyclable debris includes metal products (i.e. Mobile Trailer parts, Household appliances (White Metal), and similar items), or uncontaminated soil.

3.4 **Household Hazardous Waste (HHW).** Household hazardous wastes, such as petroleum products, paint products, etc., and known or suspected hazardous materials, such as asbestos, lead-based paint, or electrical transformers shall be removed by others. Coordination for hazardous debris removal is the responsibility of the Government. Known or suspected HHW that mistakenly enter the waste stream shall be placed in an appropriate storage area for removal by others.

3.5 **Stumps.** Tree stumps with base cut measurements less than 2 feet in diameter will be disposed of with the same methods used for other burnable debris. Tree stumps larger than 2 feet in diameter will be disposed of by either splitting and burning, or chipping/grinding. The method will be at the discretion of the Contractor.

3.6 **Ash**. Ash is the residue produced by incineration of the burnable debris. When handling ash, it will be required to "wet down" the ash to prevent dust problems.

3.7 **Chips/Mulch**. Chips and mulch is the end product of chipping or grinding wood products. Proper disposal of chips and mulch is to find environmentally friendly (non-landfill disposal) use for the material.

4.0 PERFORMANCE SCHEDULE

4.1 Immediately following Bid Opening, the apparent low bidder will meet with the COR to discuss matters of judgment, safety, quality control, coordination, payment, record keeping, and reporting.

4.2 **Schedule.** The Contractor shall begin preparation for mobilization immediately after Notice to Proceed and be fully operational within [HOURS] hours after Notice to Proceed.

4.3 **Production.** The Contractor is required to process a minimum of [RATE], [NOTE*: MOST INCENERATORS BURN 150 TO 180 CY PER HOUR, ALLOW 4 HOURS DOWN TIME FOR SERVICE/ASH REMOVAL PER 24 HOURS*] cubic yards of debris per calendar day. The minimum required reduction/disposal rate shall be achieved no later than the second calendar day after receipt of Notice to Proceed. This minimum production rate is increased to [INCREASED RATE] in the event that the Government exercises the option for additional reduction capacity. Liquidated damages shall be assessed at $[AMOUNT] per calendar day for any day in which the minimum processing rate is not met, unless non-compliance is due to insufficient debris amounts being delivered to the site.

4.4 **Completion.** All work, including site restoration prior to close-out, shall be completed within [DAYS] calendar days after receiving notice from the COR that the last load of debris has been delivered, unless the Government initiates additions or deletions to the contract by written change orders. Subsequent changes in completion time will be equitably negotiated by both parties pursuant to applicable State and Federal law. Liquidated damages shall be assessed at $[AMOUNT] per calendar day for any time over the maximum allowable time established above.

5. EQUIPMENT

5.1 The Contractor shall provide all equipment necessary to prepare the site, stockpile the debris, feed the air curtain incinerator(s), remove ash from the incinerator(s), load and haul for disposal all non-burnable debris and ash residue, and any other equipment which may be necessary for the performance of this contract. The Contractor shall comply with local, tribal, State and Federal safety and health requirements.

5.2 All equipment must be in compliance with all applicable Federal, State, tribal and local rules and regulations. All equipment and operator qualifications will meet the requirements of local, tribal, State and Federal safety and health requirements. The Contractor using the applicable inspection forms will inspect equipment prior to its use. The completed forms will be provided to the Government.

Prior to commencing debris reduction and disposal operations, the Contractor shall present to the Contracting Officer or his representative, the COR, for approval, a detailed description of all equipment to be used for debris handling, sorting, processing, incinerating, loading and hauling, stating brand name, model and horsepower,(including all air curtain incinerators).

5.4 Equipment which is designated for use under this contract shall not be used for any other work during the working hours of this contract. The Contractor shall not solicit work from private citizens or others to be performed in the designated work area during the period of this contract. Under no circumstances will the Contractor mix debris hauled or processed for others with debris hauled or processed under this contract.

5.5 Reduction of burnable debris may be by either air curtain pit burning or portable air curtain incinerators. Section 6.0 specifies requirements for air curtain pit burning. Section 7.0 specifies requirements for portable air curtain incinerators.

[DELETE NEXT SECTION IF CHIPPING/GRINDING/MULCHING NOT ALLOWED IN CONTRACT]

5.6 Reduction of burnable wood debris may also be accomplished by chipping and grinding, provided the processing rate given in Section 4.3 can be maintained. Section 8.0 specifies requirements for chipping and grinding procedures.

6.0 AIR-CURTAIN PIT BURNING

[SELECT ONE OF THE NEXT TWO PARAGRAPHS AND DELETE THE OTHER, DEPENDENT UPON WHETHER THE PIT IS TO BE CONSTRUCTED ABOVE GROUND OR DUG DOWN, BASED ON WATER TABLE]

[BELOW-GRADE PIT; LOW WATER TABLE]

6.1 The air curtain pit burning method incorporates an earthen pit, constructed by digging below grade, and a blower. The blower and pit make up an engineered system that must be precisely configured to properly function. The blower must have adequate air velocity to provide a "curtain effect" to hold smoke in and to feed air to the fire below. The pit configuration must have a precise width, depth and length to compliment the blower. The composition and operation of the air curtain pit incinerator(s) shall conform generally to the drawings in Figures 1, 2, and 3 of this scope of work.

[ABOVE-GRADE PIT; HIGH WATER TABLE]

6.1 The air-curtain pit burning method incorporates an earthen pit, constructed by building above grade, and a blower. The blower and pit make up an engineered system that must be precisely

configured to properly function. The blower must have adequate air velocity to provide a "curtain effect" to hold smoke in and to feed air to the fire below. The pit configuration must have a precise width, depth and length to compliment the blower. The composition and operation of the air-curtain pit incinerator(s) shall conform generally to the drawings in Figures 1, 2, and 3 of this scope of work.

6.2 Minimum required air velocity measured at the nozzle is 8,800 ft/min (100 mph). Minimum airflow rate measured at the nozzle is 900 cubic feet per min per linear foot of pit length. (As an example, a 20-ft long pit would require a blower with a nozzle velocity of 8,800 ft/min and nozzle output rate of 18,000 cfm. This example is intended for explanation purposes only, and does not imply a recommended pit length for actual operations.)

6.3 The pit should be a maximum of 8 feet wide, and should be from 12 to 20 feet deep. The actual pit dimensions should be such that the system functions properly.

6.4 Pits must be constructed out of a highly compactible material that will hold its shape and support the weight of the loading equipment. There shall be an impervious layer of clay or limestone on the bottom of the pit to provide a barrier for ground water protection. This layer shall be a minimum of 1 foot thick and be repaired as necessary after each ash removal operation.

6.5 There is to be a minimum distance of 100 feet between the burn area and the nearest debris piles. There is to be a minimum distance of 1,000 feet between the burn area and the nearest building. Contractors are responsible for assuring that the public and workers are kept a safe distance from the burn site.

6.6 The burn will be extinguished at least 2 hours before removal of the ash mound. Wetting of the ash will be necessary to reduce dust while removing ash.

6.7 The burn pits must be made of limestone or other highly compactable material and be capable of supporting the wheel weight of the loading equipment. There should be an impervious layer of clay or limestone on the bottom of the pit to attempt to seal the ash from the aquifer. This impervious layer should be at least 1 foot thick, and should be repaired or replaced if scraped by bulldozers, excavators, or other equipment.

6.8 The ends of the pits must be sealed with dirt ash or other material to a height of 4 feet.

6.9 A 12 inch dirt seal must be placed on the lip of the burn pit area to seal the blower nozzle. The nozzle should be 3 to 6 inches from the edge of the pit.

6.10 There should be 1 foot high warning stops running the length of the pits to alert equipment operators when they are close to the pit. The warning stops should be constructed of fireproof material.

6.11 No hazardous or contained-ignitable material is to be dumped into the pit.

6.12 The air flow should hit the wall of the pit at about 2 feet below the edge of the pit and the debris should not break the path of the air flow, except during dumping.

6.13 The length of the pit should be no longer than the length of the blower system, and the pit should be loaded uniformly along the length.

6.14 The contractor is responsible for ensuring that the public is protected from the burn operation. Signs, fences, and other measures can be used depending on site conditions.

6.15 Emissions must meet State and Federal standards for burning operations.

6.16 The Contractor shall be responsible for dust control while handling ash materials.

7.0 PORTABLE AIR CURTAIN INCINERATORS

7.1 Portable incinerators use the same principles as air curtain pit systems. The primary difference being portable incinerators utilize a pre-manufactured pit in lieu of an on-site constructed earth or limestone pit. The pits are engineered to precise dimensions to compliment the blower systems. The composition and operation of the air curtain pit incinerator(s) shall conform generally to the drawings in Figures 1 and 2 of this scope of work.

7.2 Minimum required air velocity measured at the nozzle is 8,800 ft/min (100 mph). Minimum airflow rate measured at the nozzle is 900 cubic feet per min (cfm) per linear foot of pit length. (As an example, a 20-ft long pit would require a blower with a nozzle velocity of 8,800 ft/min and nozzle output rate of 18,000 cfm. This example is intended for explanation purposes only, and does not imply a recommended pit length for actual operations.)

7.3 There is to be a minimum distance of 100 feet between the portable incinerator and the nearest debris piles. There is to be a minimum distance of 1,000 feet between the portable incinerator and the nearest building. Contractors must assure that the public and workers are kept a safe distance from the incinerator.

7.4 The burn will be extinguished at least 2 hours before removal of the ash.

7.5 There should be 1 foot high warning stops running the length of the pits to alert equipment operators when they are close to the pit. The warning stops should be constructed of fireproof material.

7.6 No hazardous or contained-ignitable material is to be dumped into the pit.

7.7 The contractor is responsible for ensuring that the public is protected from the burn operation. Signs, fences, and other measures can be used depending on site conditions.

7.8 Emissions must meet State and Federal standards for burning operations.

7.9 The Contractor shall be responsible for dust control while handling ash materials.

[DELETE ENTIRE NEXT SECTION IF CHIPPING/GRINDING NOT ALLOWED; IF THIS SECTION IS DELETED, REMAINING SECTION NEED TO BE RE-NUMBERED]]

8.0 CHIPPING AND GRINDING

8.1 If the Contractor chooses to use chipping/grinding as a method of debris reduction, it is the Contractor's responsibility to acceptably dispose of the chips or mulch, at no additional cost to the Government. Because the volume reduction achieved by chipping/grinding is not as great as the volume reduction achieved by incineration, disposal of the chips or mulch in a landfill is not an acceptable means of disposal. For disposal, the chips or mulch must be put to some benefit or use. The Contractor may provide or sell the chips or mulch to be recycled for use in agricultural mulch, fuel or wood products.

8.2 The average chip size produced will be dependent on the needs of the end user, but typically should not exceed 4 inches in length and ½ inch in diameter.

8.3 Contamination: Contaminates are all materials other than wood products. Contaminates must be held to 10% or less for the chips or mulch to be acceptable. Plastics should be eliminated completely. To help eliminate contaminates, root rake loaders should be used to feed or crowd material to the chipper/grinder. Bucket loaders tend to scoop up earth, which is a contaminate. The use of hand

laborers must be utilized to pull out contaminates prior to feeding the chipper/grinders. The more contaminates, the more numerous the laborers. Shaker screens are required when processing stumps with root balls or when large amounts of soil are present in the vegetative debris.
8.4 Storage: Chips/mulch should be stored in piles no higher than 15 feet, and meet all State and local laws.

9. REPORTING

9.1 The Contractor shall submit a report to the COR no later than [TIME] each day. Each report shall contain, at a minimum, the following information:

a) Contractor's Name. b) Contract Number. c) Daily and cumulative totals of debris processed, to include method(s) of processing and disposal location(s).d) Daily estimate of Household Hazardous Waste (HHW) debris segregated, and cumulative amount of HHW placed in the designated holding area. e) Any problems encountered or anticipated.

10.0 SITE CONSIDERATIONS

10.1 Site Plan. The Contractor will provide a site operations plan for review and approval by the COR prior to beginning work. At a minimum, the plan will address the following:

a) Access to site

b) Site management, to include point-of-contact, organizational chart, etc.

c) Traffic control procedures

d) Site security

e) Site safety

f) Site layout/segregation plan

g) Hazardous waste materials plan

h) Environmental mitigation plan, including considerations for smoke, dust, noise, traffic, buffer zones, storm water runoff archeology, historic preservation, wetlands, endangered species as appropriate.

10.2 Site Preparation. The Contractor shall be responsible for preparing the site(s) to accept the debris. This preparation shall include clearing, erosion control, grading, construction and maintenance of haul roads and entrances. The Contractor shall provide utility clearances and sanitation facilities, if needed. The Contractor shall protect existing structures at the sites and repair any damage caused by his operations at no additional cost to the Government.

10.3 Site Security. The Contractor shall be responsible for installing site security measures and maintaining security for his operations at the site.

10.4 Fire Protection. The Contractor shall manage the site to minimize the risk of fire.

10.5 Ash Containment Area. The Contractor shall be responsible for the storage, removal and containment of ash from all burning operations. The containment area will be "wetted down" periodically under this contract to prevent particles from becoming airborne.

10.6 Inspection Tower. The contractor shall construct an inspection tower. The tower shall be constructed using pressure treated wood. The floor elevation of the tower shall be 10 foot above the existing ground elevation. The floor area shall be 8' by 8', constructed of 2"x 8" joists, 16" O.C. with ¾" plywood supported by four 6" x 6" posts. The perimeter of the floor area shall be protected by a 4 foot high wall constructed of 2" x 4" studs and ½" inch plywood. The floor area shall be covered with a corrugated tin roof. The roof shall provide a minimum of 6'-6" of headroom below the support beams. Wooden steps shall provide access with a handrail.

10.7 Traffic Control. The Contractor shall be responsible for control of pedestrian and vehicular traffic in the work area. Contractor shall provide all flag persons, signs, equipment and other devices necessary to meet Federal, State, tribal and local requirements. The traffic control personnel and equipment shall be in addition to the personnel and equipment required in other parts of this contract. As a minimum, one flag person shall be posted at each entrance to direct traffic to the site.

10.8 Site Closure. The Contractor shall be responsible for the closure of the debris site within [INSERT] calendar days of receiving the last load of disaster-related debris. This closure shall include removal of site equipment, debris, and all remnants from the processing operation (such as temporary toilets, observation towers, security fence, etc.), and grading the site, and restoring the site to pre-work conditions. The site will be restored in accordance with all State, tribal and local requirements. The Contractor is responsible for the proper disposal of non-burnable debris, ash, and wood chips. Disposal of the HTW debris is not the responsibility of the Contractor under this contract. The Contractor shall receive approval from the COR as to the final acceptance of a site closure. Final payment shall be released to the Contractor upon acceptance by the Contracting Officer.

11.0 HOUSEHOLD HAZARDOUS WASTE (HHW) ISSUES

11.1 The Contractor will be required to construct a containment area at the reduction site. This containment area will consist of an earthen berm with a non-permeable soil liner. The HHW containment area must be covered at all times with a non-permeable cover.

11.2 Any material found that is classified as HHW shall be reported immediately to the designated COR. This material shall be segregated from the remaining debris using a method that will allow the remaining non-HHW debris to be processed. All HHW debris will be moved and placed in the designated HHW containment area.

11.3 Disposal of the HHW debris will be by separate contract.

12.0 CONTRACTOR HHW SPILLS

12.1 The Contractor shall be responsible for reporting to the COR and cleaning up all HHW spills caused by the Contractor's operations at no additional cost to the Government.

12.2 Immediate containment actions shall be taken as necessary to minimize effect of any spill or leak. Cleanup shall be in accordance with applicable Federal, State, tribal and local laws and regulations.

12.3 Spills other than on the site shall be reported to the National Response Center, and the Contracting Officer immediately following discovery. A written follow-up shall be submitted to the COR not later than 7 days after the initial report. The written report shall be in narrative form, and as a minimum shall include the following:

a. Description of the material spilled (including identity, quantity, manifest number, etc.).
b. Determination as to whether or not the amount spilled is EPA/State reportable, and when and to

whom it was reported.
c. Exact time and location of spill, including description of the area involved.
d. Receiving stream or waters.
e. Cause of incident and equipment and personnel involved.
f. Injuries or property damage.
g. Duration of discharge.
h. Containment procedures initiated.
i. Summary of all communications the Contractor has had with press, agencies, or Government officials other than COR.
j. Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.

13.0 OTHER CONSIDERATIONS

13.1 The Contractor shall supervise and direct the work, using qualified labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the contractor. Additionally, the Contractor shall pay for all materials, personnel, taxes, and fees necessary to perform under the terms of this contract.

13.2 The Contractor must be duly licensed in accordance with the State's statutory and regulatory requirements to perform the work. The Contractor shall obtain all permits necessary to complete the work. The Contractor shall be responsible for determining what permits are necessary to perform under the contract. Copies of all permits shall be submitted to the COR.

13.3 The Contractor shall be responsible for correcting any notices of violations issued as a result of the Contractors or any subcontractors' actions or operations during the performance of this contract. Corrections for any such violations shall be at no additional cost to the Government.

14.0 MEASURMENTS

14.1 Measurements of debris processed are based upon **Cubic Yard** measurements of debris delivered to the site.

14.2 Measurement of non-burnable debris and ash is based upon **Ton** measurements measured at the landfill or final disposal site.

14.3 All efforts required in mobilization, site set-up, site closeout and demobilization shall be considered as a total **Job**.

15. PAYMENT

15.1 Payment for all debris sorted, segregated, processed, reduced and disposed by burning will be made at the unit price per cubic yard.

15.2 Payment for managing and operating the debris sites; furnishing plant, material, labor, tools and equipment necessary to process/reduce/dispose of debris; and providing for traffic control, dust control, erosion control, inspection tower, lighting, ash containment, fire protection, permits, environmental monitoring, and safety measures; are all incorporated in the bidder's unit price for burning.

15.3 Payment for loading and hauling non-burnable debris to the final disposal site will be by the ton.

15.4 The Contractor will be entitled to invoice for mobilization after all equipment is delivered to and operational at the work site. Demobilization cost will be due after all equipment is removed from the work site. Payment for mobilization and demobilization will be per job.

Payment for site preparation and site closure will be per job.

SITE MANAGEMENT FOR DEBRIS REDUCTION

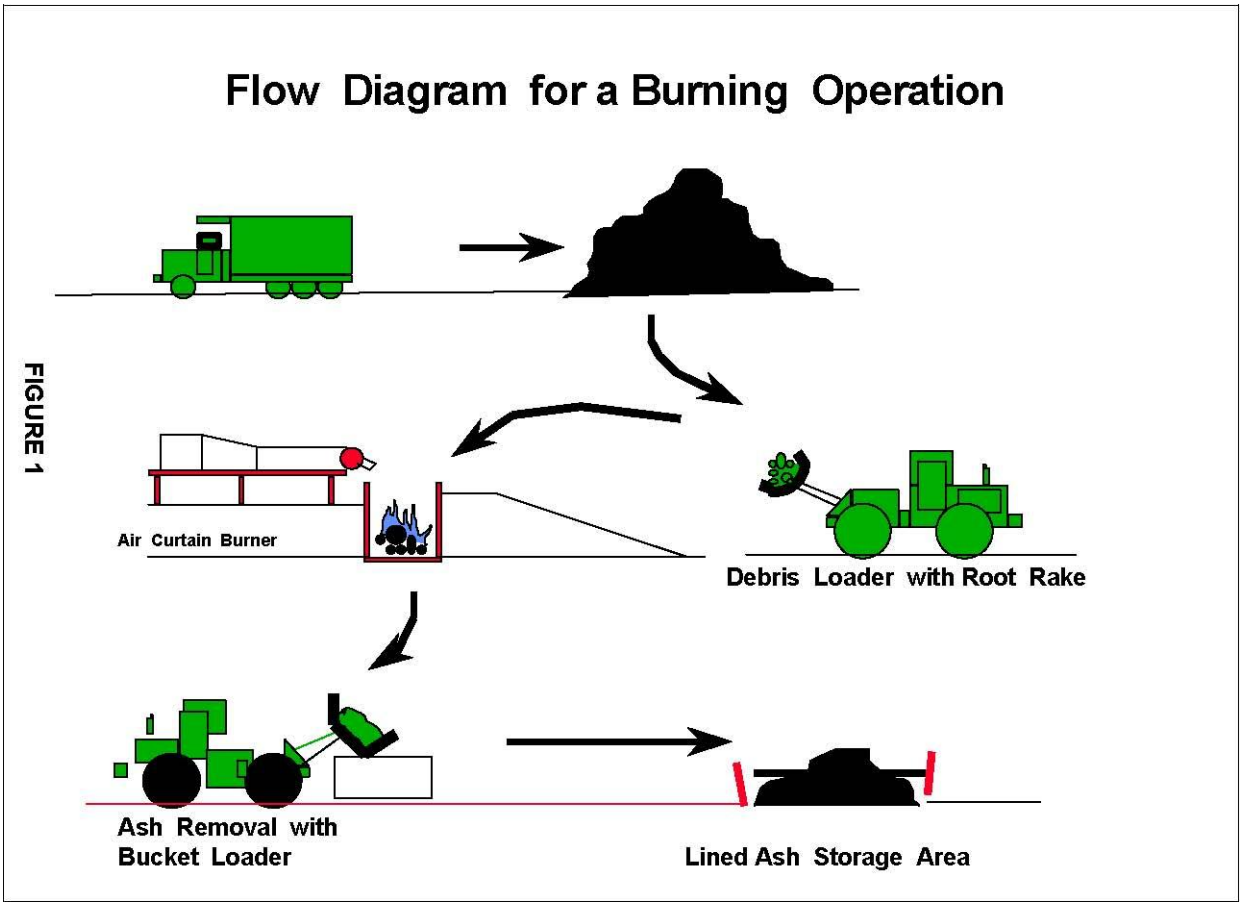


Figure 1

Overview of an Air Curtain Operation

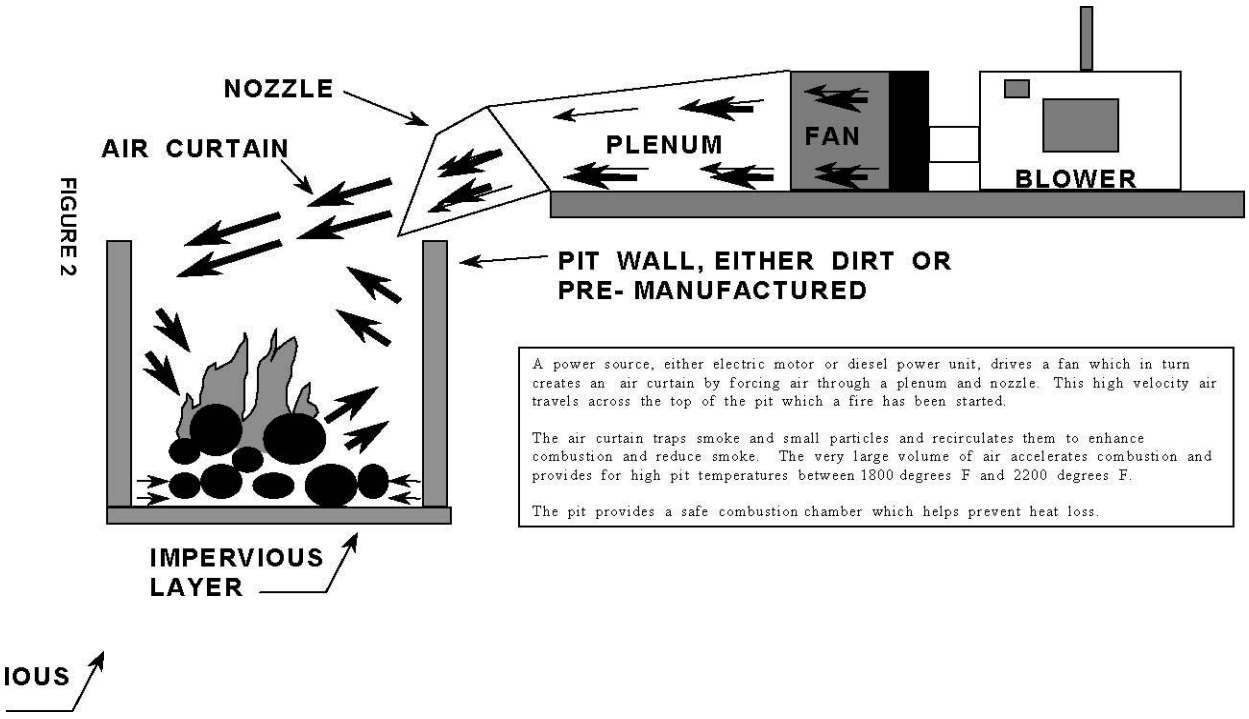


Figure 2 Air Curtain Pit Burner

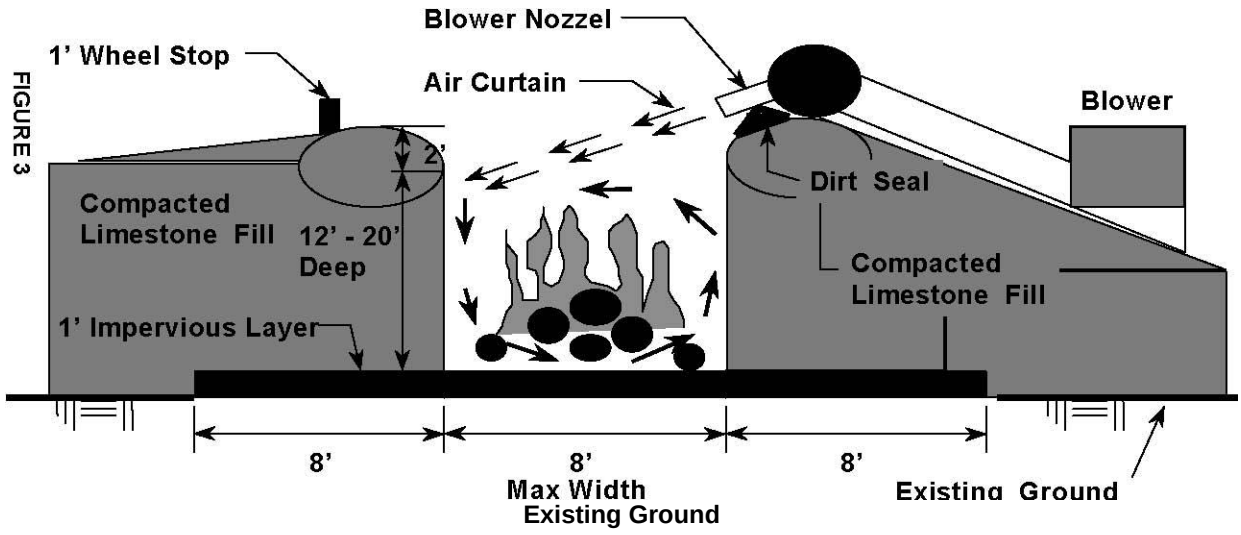


Figure 3

BIDDING SCHEDULE

CONTRACT NO._____

ITEM	DESCRIPTION	QUANTITY	UNIT OF ISSUE	UNIT PRICE	AMOUNT
1.	Mobilization.	1	Job	XXX	**$**
2.	Reduction of Burnable Debris through the Air Curtain Incineration.		CY	$	$
3.	Disposal of Non- Burnable Debris and Ash.		Ton	$	$
4.	Site Preparation and Site Closure.	1	Job	XXX	$

[DELETE THE NEXT BID ITEM IF CHIPPING & GRINDING IS NOT ALLOWED IN THE CONTRACT.]

5.	Reduction of Burnable Debris by Chipping and Grinding.		CY	$	$
6.	Reduction of Stumps greater than 24" in diameter, but less than 36" in diameter.		Stump	$	$
7.	Reduction of Stumps 36" in diameter, but less than 48" in diameter.		Stump	$	$
8.	Reduction of Stumps 48" in diameter or greater.		Stump	$	$
9.	Demobilization.	1	Job	XXX	$

Appendix H: USACE Sample Unit Price Debris Removal Scope of Work

SCOPE OF WORK
FOR
UNIT PRICE CONTRACT FOR DEBRIS REMOVAL
RELATED TO
[NAME/NATURE OF DISASTER]
AT, IN, OR NEAR
[LOCATION OF RECOVERY EFFORTS]

1.0 **GENERAL**

1.1 The purpose of this contract is to provide debris clearing and removal response assistance to [LOCATION; i.e. "North Carolina counties" or "Mobile and Baldwin Counties in Alabama"] which have been declared disaster areas by the President because of the effects of [NAME OF DISASTER].

2.0 SERVICES

2.1 The Contractor shall provide for debris removal from the area(s) outlined on the attached maps, and described as: [DESCRIPTION OF WORK AREA].

2.2 The debris shall be taken to the dumpsite(s) indicated on the attached maps, located at [LOCATION (S) OF DUMPSITE(S)].

2.3 The total amount of debris to be removed under this contract is estimated to be [QUANTITY].

2.4 The work shall consist of clearing and removing any and all "eligible" debris (see section 4.0 for a definition of eligible debris) primarily from the public right-of-way (ROW) of streets and roads, as directed by the Contracting Officer's Representative (COR). Work will include 1) examining debris to determine whether or not debris is eligible, burnable or non burnable, 2) loading the debris, 3) hauling the debris to an approved dumpsite or landfill, and 4) dumping the debris at the dumpsite or landfill. Ineligible debris will not be loaded, hauled, or dumped under this contract. Burnable debris will be loaded separately from non-burnable debris. Mixed loading of burnable and non-burnable will be kept to a minimum. The COR will determine the appropriate dumpsite for mixed loads.

2.5 Debris removal shall include all eligible debris found on the ROW within the area designated by the COR. The COR may specify any eligible debris within the ROW which should not be removed, or which should be removed at a later time. The Contractor shall make as many passes through the designated area as required by the COR. The Contractor shall not move from one designated work area to another designated work area without prior approval from the COR. Any eligible debris, such as fallen trees, which extends onto the ROW from private property, shall be cut at the point where it enters the ROW, and that part of the debris which lies within the ROW shall be removed. The Contractor shall not enter onto private property during the performance of this contract.

2.6 The Contractor shall conduct the work so as not to interfere with the disaster response and recovery activities of Federal, State, tribal and local governments or agencies, or of any public utilities.

2.7 The government reserves the right to inspect the site, verify quantities, and review operations at any time.

2.8 All work shall be accomplished in a safe manner in accordance with EM 385-1-1.

3. LOAD TICKETS

3.1 "Load tickets" will be used for recording volumes of debris removal. (See Enclosure)

3.2 Each ticket will contain the following information:

Ticket Number
Contract Number
Date
Contractor Name
Site Departure Time
Dump Arrival Time
Debris Classification
Debris Quantity

3.3 [SELECT ONLY ONE OF THE FOLLOWING PARAGRAPHS, AND DELETE THE OTHERS]

Load tickets will be issued by a COR prior to departure from the loading site. The COR will keep one copy of the ticket, and give three copies to the vehicle operator. Upon arrival at the dumpsite, the vehicle operator will give the three copies to the COR at the dumpsite, the COR will validate, retain one copy and give two copies to driver for the Contractor's records, (one copy for the sub-contractor and one copy for the prime contractor).

Load tickets will be issued by a COR prior to departure from the loading site. The COR will keep one copy of the ticket, and give two copies to the vehicle operator for the Contractor's records.

Load tickets will be issued by a COR to a vehicle operator upon arrival at the dumpsite. The COR will keep one copy of the ticket, and give two copies to the vehicle operator for the Contractor's records.

4.0 **DEBRIS CLASSIFICATION**

4.1 **Eligible Debris.** Debris that is within the scope of this contract falls under three possible classifications: Burnable, Non-Burnable, and Recyclable. Debris that is classified as Household Hazardous Waste (HHW) is not to be transported by this contract.

4.2 **Burnable Debris**. Burnable debris includes all biodegradable matter except that included in the following definitions of other categories of debris. It includes, but is not limited to, damaged and disturbed trees; bushes and shrubs; broken, partially broken and severed tree limbs; untreated structural timber; untreated wood products; and brush.

4.3 **Non-Burnable Debris.** Non-burnable debris includes, but is not limited to, treated timber; plastic; glass; rubber products; metal products; sheet rock; cloth items; non-wood building materials; metal products (i.e. Mobile Trailer parts, Household appliances (White Metal), and similar items), or uncontaminated soil; roofing materials; and carpeting.

4.4 **Household Hazardous Waste (HHW).** Household hazardous wastes, such as petroleum products, paint products, etc., and known or suspected hazardous materials, such as asbestos, lead-based paint, or electrical transformers shall be removed by others. Coordination for hazardous debris removal is the responsibility of the Government.

4.5 **Stumps.** Tree stumps located within the ROW with are one-half or more of the root ball exposed will be removed. Tree stumps with base cut diameter measurements less than or equal to 24 inches (measured 24 inches up from where the tree originally exited the ground) will be considered to be burnable debris and removed off with the same methods used for other burnable debris. Tree stumps larger than 24 inches in diameter will be removed of as burnable and paid for in accordance to the MEASURMENT and PAYMENT paragraphs in this contract.

5.0 **DUMPSITES**

5.1 The Contractor shall use only debris dumpsites designated in Section 2.2, unless otherwise approved by the COR. The Contractor shall haul non-burnable debris to the site designated for non-burnable debris and burnable debris to the burn sire designated.

5.2 The dumpsite operator shall direct all dumping operations. The Contractor shall cooperate with the

dumpsite operator to facilitate effective dumping operations.

5.3 The Government makes no representations regarding the turn-around time at the dumpsites.

6.0 PERFORMANCE SCHEDULE

6.1 The Contractor shall commence performance on [DATE].

6.2 The Contractor shall, with the CORs direction, provide a work with plan showing where operations will begin and which streets/roads will be cleared on a 2, 7, 14 day projection. The plan will be updated every 2 days.

6.3 Maximum allowable time for completion will be [ENTER] calendar days, unless the Government initiates additions or deletions to the contract by written change orders. Subsequent changes in completion time will be equitably negotiated by both parties pursuant to applicable State and Federal law. Liquidated damages shall be assessed at $[AMOUNT] per calendar day for any time over the maximum allowable time established by the contract.

7. EQUIPMENT

7.1 All trucks and other equipment must be in compliance with all applicable Federal, State, tribal and local rules and regulations. Any truck used to haul debris must be capable of rapidly dumping its load without the assistance of other equipment; be equipped with a tailgate that will effectively contain the debris during transport and permit the truck to be filled to capacity; and measured and marked for its load capacity.

Sideboards or other extensions to the bed are allowable provided they meet all applicable rules and regulations, cover the front and both sides, and are constructed in a manner to withstand severe operating conditions. The sideboards are to be constructed of 2" by 6" boards or greater and not to extend more than two feet above the metal bedsides. The Contracting Officer's representative must approve all requests for extensions. Equipment will be inspected prior to its use by the Contractor using applicable U.S. Army Corps of Engineers forms. The forms will be provided to the Government after completion.

7.2 Trucks and other heavy equipment designated for use under this contract shall be equipped with two signs; one attached to each side. The U.S. Army Corps of Engineers will furnish these signs to the Contractor. The signs remain the property of the United States Government, and will be returned to the U.S. Corps of Engineers at the conclusion of the contract.

7.3 Prior to commencing debris removal operations, the Contractor shall present to the Government's representative all trucks or trailers that will be used for hauling debris, for the purpose of determining hauling capacity. The hauling capacity will be based on the interior dimensions of the truck's metal dump bed. Hauling capacity, in cubic yards, will be recorded and marked on each truck or trailer with permanent markings. Each truck or trailer will also be numbered for identification with a permanent marking.

7.4 Trucks or equipment which is designated for use under this contract shall not be used for any other work during the working hours of this contract. The Contractor shall not solicit work from private citizens or others to be performed in the designated work area during the period of this contract. Under no circumstances will the Contractor mix debris hauled for others with debris hauled under this contract.

7.5 Equipment used under this contract shall be rubber tired and sized properly to fit loading conditions. Excessive size equipment (6 CY and up) and non-rubber tired equipment must be approved by the COR.

8.0 REPORTING

8.1 The Contractor shall submit a report to the COR during each day of the term of the contract. Each report shall contain, at a minimum, the following information:

Contractor's Name Contract Number Crew Location of work Day of Report Daily and cumulative totals of debris removed, by category

8.2 Discrepancies between the daily report and the corresponding load tickets will be reconciled no later than the following day.

9.0 **OTHER CONSIDERATIONS**

9.1 The Contractor shall supervise and direct the work, using skillful labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor. Additionally, the Contractor shall pay for all materials, personnel, taxes, and fees necessary to perform under the terms of this contract.

9.2 The Contractor must be duly licensed in accordance with the state's statutory requirements to perform the work. The Contractor shall obtain all permits necessary to complete the work. The Contractor shall be responsible for determining what permits are necessary to perform under the contract. Copies of all permits shall be submitted to the COR.

9.3 The Contractor shall be responsible for taking corrective action in response to any notices of violations issued as a result of the Contractors or any subcontractors' actions or operations during the performance of this contract. Corrections for any such violations shall be at no additional cost to the Government.

9.4 The Contractor shall be responsible for control of pedestrian and vehicular traffic in the work area. The Contractor shall provide all flag persons, signs, equipment, and other devices necessary to meet Federal, State, tribal and local requirements. The traffic control personnel and equipment shall be in additional to the personnel and equipment required in other parts of this contract. At a minimum, one flag person should be posted at each approach to the work area. Work shall be accomplished in a safe manner in accordance with EM 385-1-1.

10.0 **MEASUREMENT**

10.1 Measurement for burnable debris removed will be by the cubic yard as predetermined through truck bed measurement. Trucks with less than full capacities will be adjusted down by visual inspection by the COR. Measurement will be documented by load tickets.

10.2 Measurement for non-burnable debris removed will be by the cubic yard as predetermined through truck bed measurement. Trucks with less than full capacities will be adjusted down by visual inspection by the COR. Load tickets will document measurement

10.3 Measurement for payment of stumps removed with 25 to 36 inch diameters base cuts (measured 24 inches up from where the tree originally exited the ground) shall be per stump.

10.4 Measurement for payment of stumps removed with 37 to 48 inch diameter base cuts (measured 24 inches up from where the tree originally exited the ground) shall be per stump.

10.5 Measurement for payment of stumps removed with 49 inch and larger diameter base cuts (measured 24 inches up from where the tree originally exited the ground) shall be per stump.

10.6 Measurement for mobilization and demobilization will be by the job.

11.0 **PAYMENT**

11.1 Payment for the removal of burnable debris (including stumps 24 inches and smaller) to include all cost associated with loading, hauling and dumping will be paid for under the contract bid item for **Burnable Debris.**

11.2 Payment for the removal of non-burnable debris to include all cost associated with loading, hauling and dumping will be paid for under the contract bid item for **Non-burnable Debris.**

11.3 Payment for the removal of stumps, 25 inches and larger, to include all cost associated with loading, hauling and dumping will be paid for under the contract bid item for the appropriate size category for

Stumps.

11.4 Payment for mobilization and demobilization will be paid for under the contract bid item for Mobilization and Demobilization**.**

11.5 Payment for work completed may be invoiced on a bi-weekly basis. Invoices will be based on verified quantities from the daily operational reports and valid load tickets.

11.6 The Contractor will be entitled to invoice for 60% of the mobilization and demobilization line item after all equipment is delivered to the designated work site. The remaining 40% will be due after all equipment is removed from the work site, all vehicle signs have been returned to the government, and receipt of a proper invoice.

11.7 All payments made under this contract will be in accordance with PAYMENTS clauses located in other sections of this contract

12.0 **OTHER CONTRACTS**

12.1 Other contracts may have been issued.

12.2 The Government reserves right to issue other contracts or direct other contractors to work within the area included in this contract.

13. ENCLOSURES/ATTACHMENTS

13.1 Bidding Schedule

13.2 Daily Report

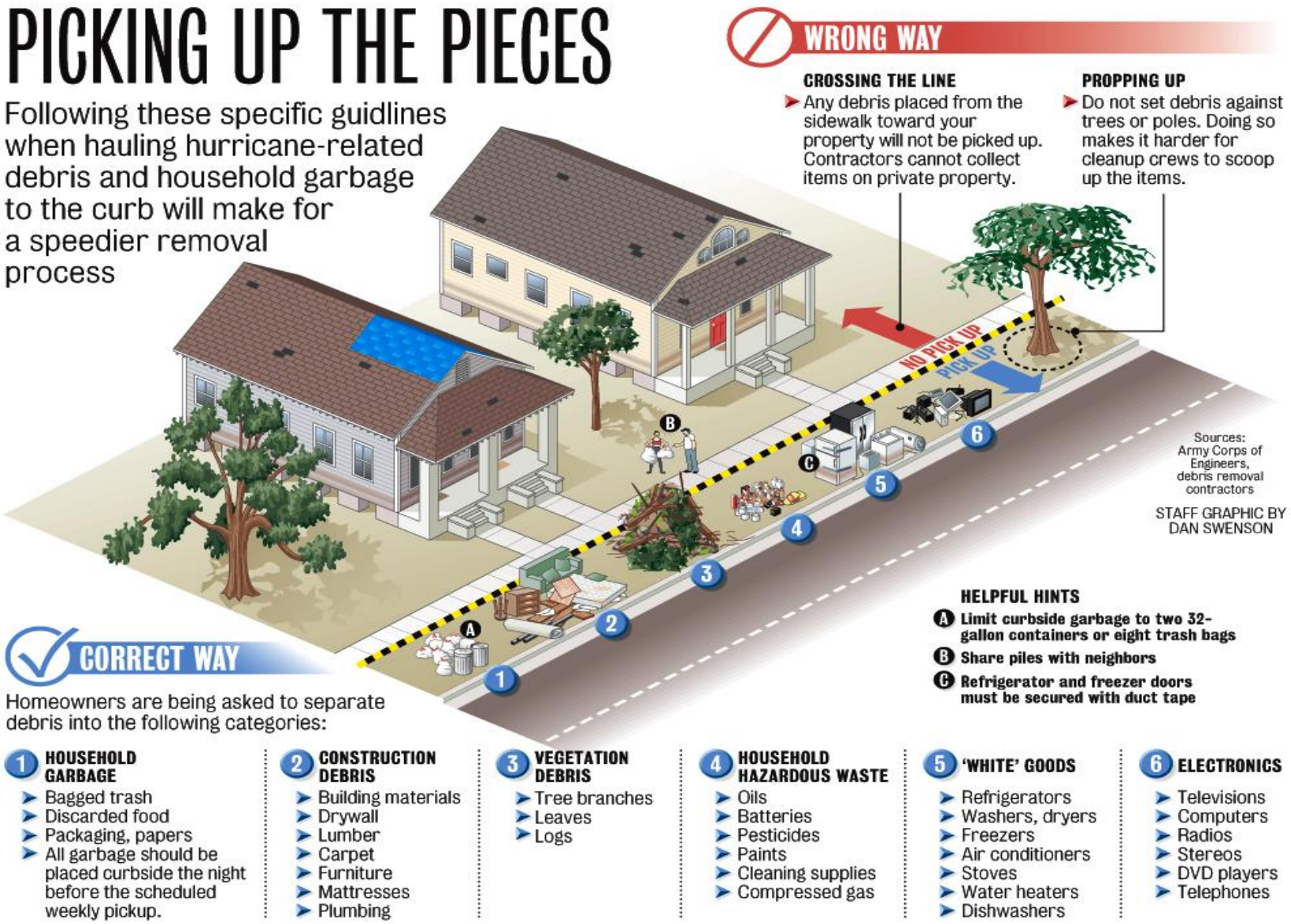
BIDDING SCHEDULE

ITEM	QTY	DESCRIPTION	UNITS	UNIT PRICE	AMOUNT
001.	1	Mobilization and Demobilization	Lump Sum		
002.	xxx	Removal of Burnable Debris	Cubic Yard		
003.	xxx	Removal of Non-Burnable Debris	Cubic Yard		
004.	xxx	Removal of Stumps - 26 to 36 inch	Each		
005.	xxx	Removal of Stumps - 37 to 48 inch	Each		
006.	xxx	Removal of Stumps - 49 inch and larger	Each		

DAILY REPORT						
CONTRACTOR: CONTRACT NO. :					DATE OF REPORT:	
Truck No.		Capacity	Burn site trips	C.Y. Totals	Landfill trips	C.Y. Totals
1						
2						
3						
4						
5						
6						
7						
8						
	Daily Totals					

DAILY REPORT				
CONTRACTOR:			DATE OF REPORT:	
Processing Site		Stumps 26-36 in.	Stumps 36-48 in.	Stumps > 49”
1				
2				
3				
4				
5				
6				
7				
8				
9				
	DAILY TOTALS			

Appendix I: New Orleans Sample Diagram of Curbside Collection Separation



Appendix J: Animal Carcass Management

The planning framework for managing Animal Carcasses on the following pages applied to managing large numbers of animal carcasses. This framework recognizes that decisions about disposing of large amounts of animal carcasses must be made based on site-specific information, including whether the animals are infectious and, if so, what the disease agent is (if known); the location, number and type of carcasses; and site characteristics that may limit on-site management. In the case of avian flu in particular, Massachusetts has prepared specific draft recommendations for managing avian flu debris. Other animal disease outbreaks may require different management approaches.

However, some pre-planning can be done so that carcass management approaches in certain kinds of situations are generally accepted and agreed upon in advance. Some of the major points of Massachusetts' approach to managing animal carcasses include:

- Whenever possible, carcasses from diseased populations should be managed on site to prevent the potential transmission of disease agents. This may be most easily achieved on farms, which are on a defined property, depending on site-specific conditions. However, this will frequently not be possible for small backyard populations or for diseased wildlife.
- In many cases, carcasses can be effectively composted. Because composting achieves temperatures of 135 – 140 degrees Fahrenheit, composting will kill many viruses, effectively eliminating the risk of the disease spreading. However, in some cases, this temperature may not be sufficient to kill the pathogen and other alternatives must be considered.
- MassDEP generally discourages on-site burial of large numbers of carcasses because of potential for groundwater pollution and because the carcasses may be dug up at a later date. On-site burial also may not be effective in killing disease agents. But, on-site burial may provide a temporary management option if carcasses must be immediately isolated and no other management option has been established.
- MassDEP also generally discourages on-site burning of carcasses, due to air quality concerns, because combustion may not achieve effective pathogen kill in some cases, and because some types of carcasses burn poorly. However, in certain emergency situations when other options are exhausted, MassDEP may approve the use of air curtain burners or other controlled burning options to manage carcasses. The viability of potentially burning carcasses also depends in large part on the type of carcass and how well that animal would burn.
- In some cases, large numbers of healthy animals may die as the result of a major storm and require disposal or other management. It will be important to manage the carcasses as quickly as possible to limit odor and other nuisance concerns, as well as to prevent the development of diseases. In these cases, when concerns about transmitting diseases are minimal, then off-site management of carcasses would be considered more readily than if the animals were considered to be infectious. In cases when on-site management solutions are not viable, carcasses may need to be

sent to an off-site facility for disposal. This also may be necessary for wildlife or small backyard populations for which on-site carcass management is not feasible.

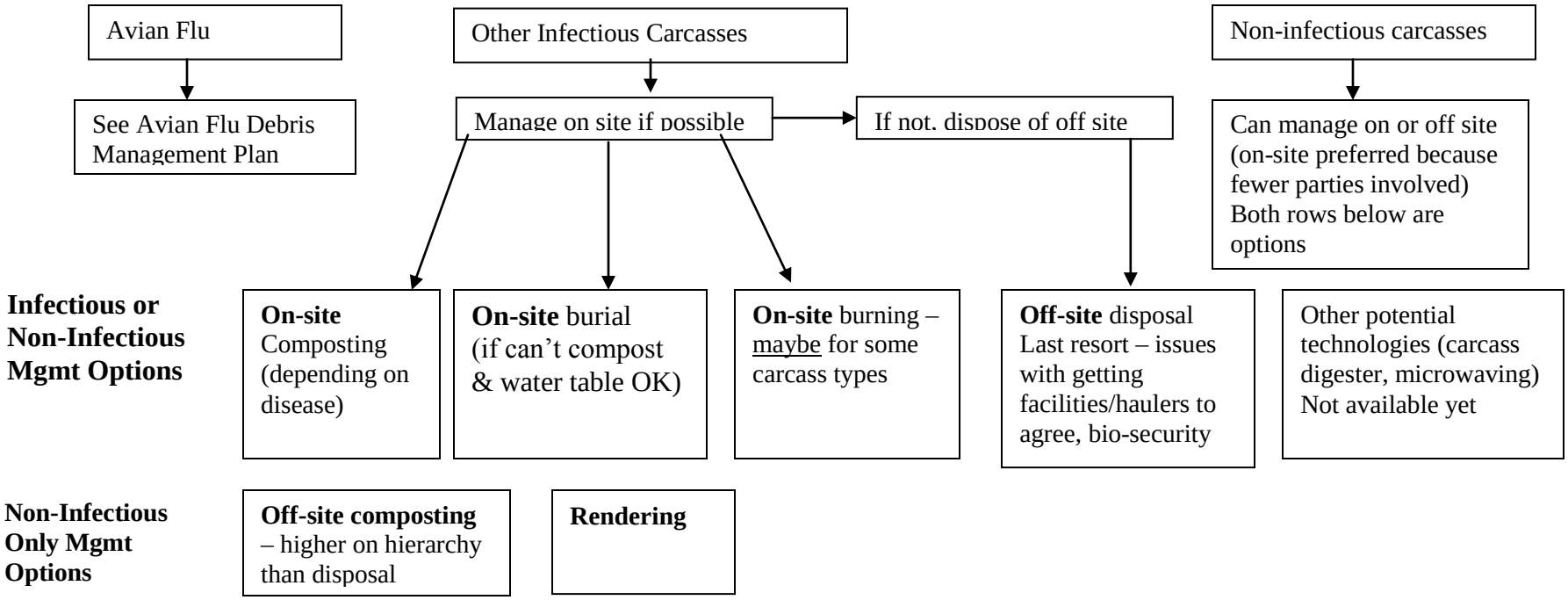
- In such cases, the closest receiving facility that is willing to accept the carcasses should be identified. This may include landfills, municipal waste combustion facilities, or even other alternatives such as a rendering plant, but carcasses should not be sent to a transfer station, where they will be handled twice.
- If carcasses are to be moved off-site, decontamination and disinfection procedures for all staff, equipment, and vehicles should be followed at the site, in transit, and at the receiving facility. Exposure to carcasses should be limited by placing carcasses in sealed containers for transport and disposal.
- Several technologies are available in other parts of the country to process carcasses through mobile microwaving/sterilization or alkaline hydrolysis units. While these are not available in Massachusetts at this time, they are being operated in other states and may present viable carcass management alternatives in the future.

Carcass Management Decision Framework

Case-Specific Information Needed:

- Carcasses – infectious/non-infectious (if suspect, treat as infectious)
- If infectious – type of disease agent, if known
- Number and size of carcasses
- Location
- Site factors that may limit on-site carcass management
- Key timing points/deadlines
- Financial/cost factors
- Other factors that may affect carcass management decisions

Carcass Management Decision Framework



Appendix K: Massachusetts Master Service Agreements; HLS02, HLS03

The Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs
Department of Environmental Protection

Summary of Massachusetts
Disaster Debris Monitoring & Management Contracts

October 2010

Massachusetts Disaster Debris Contracts
Disaster Debris Monitoring Services

Contract Purpose: This contract provides monitoring and oversight of disaster debris management work by public agency staff and private contractors. This monitoring is important to ensure that this work meets applicable federal standards for reimbursement in the event of a federally declared disaster event. This contractor also will monitor work to ensure that it is done in compliance with all applicable state and federal regulations and the Massachusetts Disaster Debris Management Plan.

Eligible Entities: This contract may be activated by any state agency, municipality, public authority, or any other public entity eligible to use state contracts, at the activating entity's expense.

Contractor Name: O'Brien's Response Management Inc.

Contractor Contacts

- Rose Hightower, 401-701-1172, x1754, roseann.hightower@obriensrm.com
- Emergency Contact: Daniel Sanford, 941-735-7858, daniel.sanford@obriensrm.com

Commonwealth's Contract Manager

- Tina Urato, MEMA, 508-820-1423, tina.urato@state.ma.us

Contractor Services: The Contractor will monitor debris collection from the field and operation of temporary disaster debris monitoring sites. This will ensure that only eligible debris is collected, that volumes of debris collected in the field match those at receiving sites, and that debris amounts are measured and recorded accurately and that supporting documentation is maintained and provided to the activating entity. The contractor also will attend daily meetings with the activating entity and, if applicable, the debris management contractor, to ensure that all debris management work is properly monitored.

Pricing: The contract pricing is on an hourly rate, by position category. This rate is all inclusive, including all overhead costs, administrative costs, equipment, etc. The contractor shall be responsible for all necessary support services and equipment for its workforce.

For More Information

- Visit www.comm-pass.com
- Select the Contracts tab at the top
- Click on "Search for a contract"
- Search for document number "HLS02"

Massachusetts Disaster Debris Contracts
Disaster Debris Management Services

Contract Purpose: This contract provides comprehensive disaster debris management services, to support all stages of disaster debris management, in the event that local and state resources are insufficient. This includes services to clear debris, collect and transport debris, establish and operate temporary debris management sites, and send materials for final recycling or disposal. The contractor will be responsible for conducting these activities in accordance with the *Commonwealth of Massachusetts' Disaster Debris Management Plan* and all applicable state and federal requirements.

Eligible Entities: This contract may be activated by any state agency, municipality, public authority, or any other public entity eligible to use state contracts, at the activating entity's expense.

Contractor Name: AshBritt, Inc.

Contractor Contacts

- Rob Ray, Office: 954-545-3535,Cell: 954-868-9502, rray@ashbritt.com
- Emergency Contact, John Noble, 954-683-0427, jnoble@ashbritt.com

Commonwealth's Contract Manager

- Tina Urato, MEMA, 508-820-1423, tina.urato@state.ma.us

Contractor Services: Includes debris clearance and collection of all material categories, establishment, operation and closure of temporary disaster debris management sites, and sending materials for final recycling and disposal. Where necessary, the contractor will identify and procure land for temporary debris management sites (if the activating entity cannot identify sites.)

Pricing: The contract pricing is divided into three components:

- Initial Debris Clearance Activities (first 70 hours only) – priced at an hourly rate
- Debris Management Services – priced on a unit basis by material category
- Leasing of Debris Management Sites (if public sites not available) – priced on a monthly basis per acre

These rates are all inclusive, including all overhead and administrative costs, equipment, etc. The contractor shall be responsible for all necessary support services and equipment for its workforce.

For More Information

- Visit www.comm-pass.com
- Select the Contracts tab at the top
- Click on "Search for a contract"
- Search for document number "HLS03"

Other Disaster Debris Planning Resources

Managing debris in the aftermath of a storm, flood or other disaster can often be the largest cost a town or city faces in helping its residents and businesses recover. By developing plans in advance, municipal and regional governments can be better prepared to manage and dispose of disaster debris quickly, safely and cost-effectively.

The Massachusetts Department of Environmental Protection (MassDEP) web site provides access to a variety of resources and tools that you can use in planning for disaster response. For more information, please see:

Massachusetts Department of Environmental Protection Disaster Debris Web Page
http://www.mass.gov/dep/recycle/laws/policies.htm#disaster

Disaster Debris Management Planning: An Introduction for Local Officials
http://www.mass.gov/dep/recycle/laws/debrguid.pdf

Massachusetts Local Disaster Debris Management Plan Checklist
http://www.mass.gov/dep/recycle/laws/debrchck.pdf

Massachusetts Emergency Management Agency
www.mass.gov/mema

Federal Emergency Management Agency (FEMA) Debris Management Guide
http://www.fema.gov/pdf/government/grant/pa/demagde.pdf

Public Assistance
Alternative Procedures
Pilot Program
Guide for Debris Removal

Federal Emergency Management Agency
Department of Homeland Security
500 C Street, S.W.
Washington, DC 20472

TABLE OF CONTENTS

PART I. OVERVIEW

On January 29, 2013, President Obama signed into law the Sandy Recovery Improvement Act of 2013 (P.L. 113-2). This law amends Title IV of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.) (Stafford Act). Specifically, the law adds section 428, which authorizes alternative procedures for the Public Assistance Program under sections 403(a)(3)(A), 406, 407 and 502(a)(5) of the Stafford Act. It also authorizes the Federal Emergency Management Agency (FEMA) to implement the alternative procedures through a pilot program. The program will remain in place for one year, at which point FEMA will assess the pilot's effectiveness at achieving its goals. Based on the evaluation of the pilot, FEMA may elect to discontinue the program, extend the pilot for an additional performance period, or issue regulations that would institute the program changes authorized by the law.

The law identifies the following goals for these procedures:

- Reducing the costs to the Federal Government of providing Public Assistance.
- Increasing flexibility in the administration of such assistance.
- Expediting the provision of assistance to a State, Tribal or local government, or nonprofit owner or operator of a private nonprofit facility.
- Providing financial incentives and disincentives for timely and cost-effective completion of projects with such assistance.

Public Assistance Program Features Included in the Alternative Procedures

The alternative procedures authorized under the law pertain to debris removal (emergency work) and repair, restoration, and replacement of disaster-damaged public and private nonprofit facilities (permanent work). This guide outlines the alternative procedures for debris removal only.

Alternative Procedures for Debris Removal

For debris removal, the law allows for, and FEMA is currently piloting:

- The use of a sliding scale for determining the Federal share for removal of debris and wreckage based on the time it takes to complete debris and wreckage removal;
- The use of program income from recycled debris without offset to the grant amount;
- Reimbursing base and overtime wages for the employees of State, Tribal or local governments, or owners or operators of private nonprofit facilities performing or administering debris and wreckage removal; and

- Providing incentives to a State or Tribal or local government to have a debris management plan approved[1] by the FEMA Administrator and have pre-qualified one or more debris and wreckage removal contractors before the date of declaration of the major disaster.

The law also authorizes the FEMA to make grants for debris removal on the basis of fixed estimates, and to allow Sub-grantees to use excess funds from those grants for approved purposes. FEMA is not implementing these procedures as part of this pilot. FEMA continues to work to improve debris estimating methodologies and will consider implementing these procedures in the future.

A. Applicability

In accordance with the law, State, Tribal, and local governments, and the owners and operators of certain private nonprofit facilities may participate in the alternative procedures during the pilot performance period.[2] Participation in the pilot program and use of the alternative procedures for specific projects is voluntary. If Sub-grantees use any of the alternative procedures, they will sign an acknowledgement regarding these procedures, which FEMA will attach to the Sub-grant Application (Project Worksheet) for the project(s) in question. A sample acknowledgement is provided in the Appendix.

The alternative procedures for the debris removal pilot program is available to any State, or Tribal government, upon request, for any major disaster or emergency declared on or after the date of the issuance of the pilot program guide and until the end of the pilot program period. The alternative procedures contained in this document are for large projects with the exception of reimbursement for straight time force account labor which can be applied to both small and large projects. [3] (See **Debris Removal Straight Time Force Account Labor** section.)

B. Compliance with Applicable Laws, Regulations, and Policies

The law authorizes FEMA to carry out the alternative procedures via this guidance as a pilot program. Accordingly, FEMA has developed this document to provide the framework for implementing the alternative procedures as a pilot program and to establish acceptable requirements for those elements of existing regulations that are excepted by the provisions of the

[1] FEMA will review debris management plans as described in the **Debris Management Plan** section of this document.

[2] A Grantee is defined as a State or tribal government that has chosen to serve as a Grantee. A Sub-grantee is defined as a State agency, local government, Indian Tribe, authorized tribal organization, Alaska Native village or organization, or certain Private Nonprofit organization that submits a request for disaster assistance under the presidentially declared major disaster or emergency.

[3] A large project is a project with a total estimated cost that exceeds the monetary threshold established in section 422 of the Stafford Act and 44 CFR §206.203(c). For major disasters and emergencies declared in Fiscal Year 2013, the threshold is $67,500. A small project is any project below the large project threshold.

Law. This guidance document addresses exceptions to regulations in 44 CFR §206.203(c)(1), §206.204(e), §206.206, and §206.253(a).

Sub-grantees participating in this pilot program must abide by the elements of this guidance document for applicable components of the Public Assistance Program; and FEMA will approve projects to which the alternative procedures apply in accordance with this document. However, all other statutory, regulatory and policy requirements of the Public Assistance Program apply and are not affected by the alternative procedures. The alternative procedures also do not affect requirements for compliance with other Federal requirements, including environmental and historic preservation (EHP) laws, regulations, and executive orders.

C. Purpose of this Guidance Document

This document provides guidance to FEMA, Grantees, and Sub-grantees for implementing the alternative procedures for the debris removal pilot program. This guidance document pertains only to procedures authorized under the law. FEMA, Grantees, and Sub-grantees will implement all other aspects of the Public Assistance Program in accordance with standard procedures. It describes the scope and limitations of the alternative procedures; describes changes to the aspects of the Public Assistance Program to which these procedures apply; identifies responsibilities for certain activities; and identifies timelines for key actions and decisions.

As described above, FEMA is implementing the alternative procedures initially through a pilot program. The pilot will allow FEMA to gather meaningful information on the effectiveness of the alternative procedures, to establish controls for the proper use of Federal funds, and to inform a potential future proposed rulemaking.

PART II. ALTERNATIVE PROCEDURES FOR DEBRIS REMOVAL

These procedures contain provisions intended to increase the effectiveness of debris removal operations and reduce Federal administrative costs. Although some provisions are most effective when used together, such as employing a debris removal plan in an accelerated debris removal operation, Sub-grantees may elect to use one or more of the procedures for their debris removal projects. Utilizing multiple debris removal alternative procedures is not required for any given debris removal project in order to receive the incentive for any of the other provisions. These alternative procedures are addressed in greater detail below.

A. Requesting Alternative Procedures for Debris Removal

Upon the declaration of a major disaster or emergency by the President authorizing FEMA to provide debris removal assistance, FEMA will provide eligible Public Assistance Sub-grantees within the declared area the opportunity to make a request to participate in the alternative procedures for the debris removal pilot program.

B. Accelerated Debris Removal--Increased Federal Cost Share (Sliding Scale)

The pilot program authorizes an increased Federal cost share for the collection, hauling, processing and disposal of debris when Sub-grantees complete removal operations within a specified time frame (Table 1). To participate in this procedure, debris removal projects must include all debris for which a Sub-grantee will be requesting FEMA assistance.

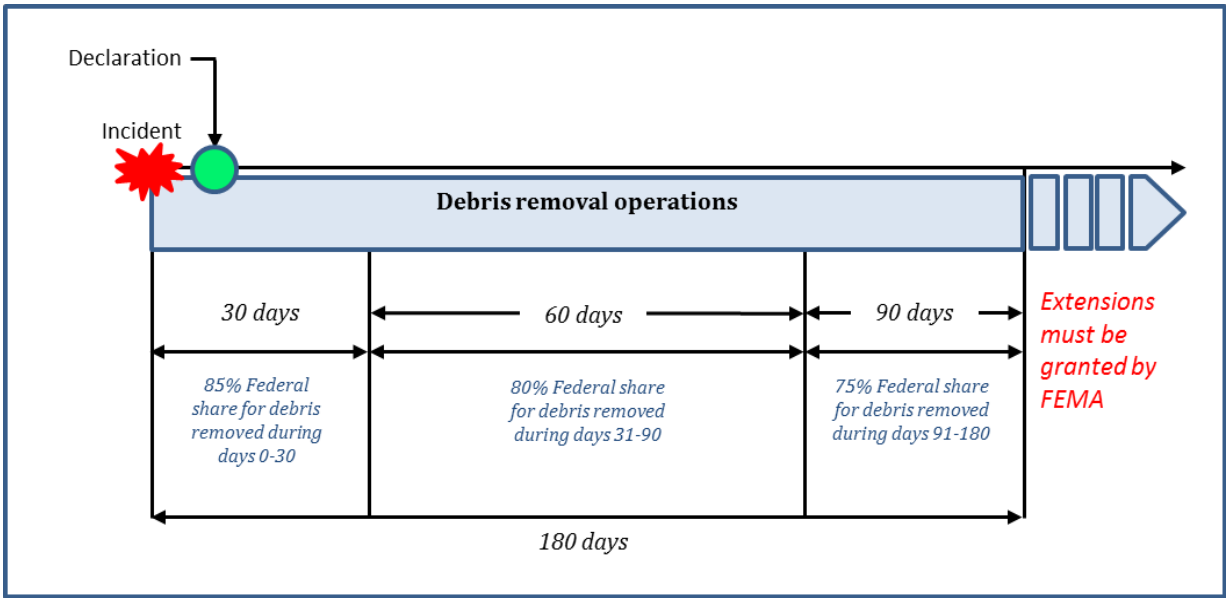
Table 1. Alternative Procedure Federal Cost Share

Debris Removal Completed (Days from Start of Incident Period)	Federal Cost Share
0-30	85%
31-90	80%
91-180	75%
Federal dollars will NOT be provided for debris removal after 180 days (unless an extension is granted)	

Reimbursement provided to Sub-grantees will be based on the Federal cost share percentages shown in Table 1 for debris removal work completed within the specified time frames. The sub-grant shall reflect actual costs for the quantity of debris removal completed from the incident's start date until the ending time frame specified in the table. The increased Federal cost share for accelerated debris removal is available only for grant assistance provided to a Sub-grantee for the debris removal it performs. It does not apply to debris removal conducted under Direct Federal Assistance (DFA).

A sub-grant will be prepared at the appropriate cost share to reflect the amount of debris removal work completed during each operational time frame. If the Sub-grantee agrees to this alternative procedure, no costs associated with debris removal that occur after 180 days from the start of the incident period will be funded, unless an extension is granted. The Grantee must make any request for an extension of the 180-day timeframe and extensions may be granted only by FEMA. See 44 CFR 206.204(d) for further information on requesting extensions. Additional debris removal beyond the 180 days cannot be funded through DFA. After agreeing to this alternative procedure, and once the first sub-grant is prepared and obligated at the increased Federal share, the Sub-grantee cannot revert back to standard procedures for the remaining debris removal costs. Figure 1 describes the overall timeline for use of the sliding scale.

Figure 1. Timeline for use of the sliding scale for debris removal.



C. Recycling Revenues

Sub-grantees may retain revenues received through recycling eligible disaster debris. The Sub-grantee shall provide the Grantee written notification of the revenue received as part of its final accounting of actual costs. This should include the completion date of the debris removal operations and a brief description of the quantity and types of debris recycled, the cost for processing debris for recycling, and whether the community's rebuilding projects used any portion of the recycled debris. The Grantee will forward this information to FEMA in the accounting of the final project costs. The cost of establishing and managing the recycling program or process and additional sorting and processing of the debris for recycling purposes cannot be claimed as a direct project cost on the debris removal sub-grant. This alternative procedure can be used in combination with any other alternative procedure or on its own.

Sub-grantees can use revenues from debris recycling only for the following approved purposes: to meet the cost sharing requirements of Public Assistance grant funding for debris removal; to develop comprehensive disaster preparedness and assistance plans, programs, and capabilities; to conduct activities that reduce the risk of future damage, hardship or suffering from a major disaster; or to improve future debris removal operations or planning. Activities that improve future debris removal operations and planning may include:

- Developing disaster debris management plans
- Updating or revising existing plans
- Enhancing Sub-grantee landfill-management sites
- Installing mechanisms such as debris trash racks, K-Rail debris guards and silt fences to control the flow of disaster debris in future events
- Buying equipment such as street sweepers, shredders, backhoes, balers and sorting conveyors that would facilitate sorting, volume reduction, or removing disaster debris
- Purchasing debris recycling equipment
- Purchasing software and hardware products to facilitate quantifying disaster debris
- Buying onboard weight measurement systems for debris-collection trucks
- Purchasing software systems for debris load management to assist in tracking trucks, drivers and routes

If revenues are not used for an authorized purpose, grant funding will be reduced by the amount of that revenue as program income.

D. Straight Time Force Account Labor

When Sub-grantees use their own labor forces to perform all or part of debris removal operations, FEMA will reimburse, at the appropriate cost share level, the base and overtime wages for existing employees and hiring of additional staff. FEMA will calculate labor costs based on the appropriate labor classifications and skills for the work necessary to accomplish each type of removal and monitoring operations. Sub-grantees shall track labor hours for each employee and additional staff. Sub-grantees also shall keep accurate hourly records for each employee and additional staff assigned to removal activities. This alternative procedure can be used with any other alternative procedure or on its own. This alternative procedure can be applied to both large and small projects for Sub-grantees participating in the pilot.

E. Debris Management Plans

A Sub-grantee with a FEMA-reviewed debris management plan at the time of an event can increase the effectiveness of its debris management operations. Specifically, a debris management plan should improve a Sub-grantee's ability to complete debris removal within the timelines associated with the sliding scale.

When the Sub-grantee has a FEMA-reviewed debris management plan before the date of the disaster declaration incident period, FEMA will provide a one-time incentive of a 2 percent cost share adjustment applied to debris removal work completed within 90 days. This one-time incentive will not be available to the same Sub-grantee again during the course of the pilot. This procedure can be used with any of the other pilot procedures or on its own. FEMA will review plans presented through the Grantee. Plans should include all of the following elements:

- Debris management overview
- Events and assumptions
- Debris collection and removal plan
- Debris disposal locations and debris management sites
- Debris removal on private property
- Use and procurement of contracted services
- Use of force account labor
- Monitoring of debris operations
- Health and safety requirements
- Environmental considerations and other regulatory requirements
- Public information

The legislation also requires a Sub-grantee to have at least one or more pre-qualified contractors.[4] Any debris contract award must comply with Federal procurement requirements, as outlined in 44 CFR §13.36. Federal procurement compliance may have more stringent requirements than State or local requirements.

In addition, the content of the plans will vary and depend highly on State and local ordinances and zoning, as well as the location of critical infrastructure, emergency services, disposal locations, and other localized factors. FEMA will review the plans to ensure that Subgrantees have considered the elements listed above. FEMA review of the plan does not mean it is approving any operational component of the plan and does not commit the Federal government to funding any aspect of the plan.

[4] A pre-qualified contractor is one that has been identified and evaluated by a local government and has been determined to be capable to perform debris removal work (e.g., capabilities, bonding, insurance, availability). Identification of these qualifications should be done in conjunction with the drafting of a debris management plan, which should include specific contract requirements and explain how contractor qualifications are established. A pre-qualified contractor does not constitute a "stand-by" contract.

PART III. GRANTS MANAGEMENT REQUIREMENTS

The process for monitoring and closing projects is streamlined under the alternative procedures. The grants management requirements are outlined in the sections that follow.

A. Grants Management Activities

For projects funded under the alternative procedures, major activities conducted during the Grants Management phase are as follows:

- The Sub-grantee must complete work within established regulatory time frames and request time extensions as appropriate, pursuant to 44 CFR §206.204(d) *Requests for time extensions*.
- The Sub-grantee must submit quarterly progress reports to the Grantee for large projects in which the work is not completed and financially reconciled, pursuant to 44 CFR §206.204(f) *Progress reports*.
- The Grantee will provide funds to the Sub-grantee in accordance with Federal and State requirements.
- The Grantee will ensure that Sub-grantees understand and adhere to Federal procurement requirements as well as other requirements of 44 CFR Part 13, 2 CFR Part 215, and the appropriate Office of Management and Budget circulars.
- The Grantee will ensure that Sub-grantees comply with EHP requirements, notify FEMA of any work that requires EHP compliance reviews, and provide necessary documentation to conduct EHP reviews.
- The Sub-grantee must not deposit grant funds in an interest-bearing account. If that occurs, the Sub-grantee must remit any interest earned to FEMA.
- The Sub-grantee will submit to the Grantee a final report of project costs. This report will be used to track and monitor the success of the pilot (see Standard Operating Procedures 9570.14, *Program Management and Closeout* for information on closeout processes and requirements). The final report should include the following components as documented on the Project Worksheet (FEMA Form 90-91):
    - Total actual costs to complete the sub-grant
    - Actual quantities of debris removed
    - Time frames for full removal of debris
    - Compliance with Federal procurement requirements
    - Documentation of compliance with all sub-grant conditions
    - Compliance with EHP conditions

B. Sub-grant Closure

Alternative procedures sub-grants are closed when the approved scope of work is completed, and the Sub-grantee provides the Grantee an accounting of the sub-grant in accordance with the above requirements. The Grantee will provide the accounting of project costs to FEMA and will request the project be closed.

C. Appeals

For sub-grants funded using the alternative procedures, the Sub-grantee can submit an appeal, in accordance with 44 CFR §206.206, only for the following:

- Sub-grant approval and obligation
- Corrective actions resulting from compliance reviews such as an audit

D. Audits and Compliance Reviews

The Office of Inspector General may audit any Sub-grantee and/or sub-grant. FEMA also can conduct compliance reviews of grants and sub-grants. Any corrective actions the Agency takes as a result of these audits or compliance reviews may be appealed in accordance with 44 CFR §206.206. For alternative procedures sub-grants, a compliance audit will review sub-grants and costs to ensure that the Sub-grantee complied with the guidelines contained within this document and other applicable requirements.

PART IV. REPORTING AND PERFORMANCE MEASURES

FEMA will review and evaluate the alternative procedures pilot program to determine if the pilot met the objectives of the Sandy Recovery Improvement Act. FEMA will assess if the pilot achieved the objectives for the alternative procedures outlined in the law, namely:

- Reducing the costs to the Federal Government of providing Public Assistance.
- Increasing flexibility in the administration of such assistance.
- Expediting the provision of assistance to a State, Tribal or local government, or nonprofit owner or operator of a private nonprofit facility.
- Providing financial incentives and disincentives for timely and cost-effective completion of projects with such assistance.

FEMA will implement a comprehensive assessment based on performance measures and metrics that are identified to measure the success of the pilot in meeting these objectives. If the pilot is determined to be effective, the data will be used to inform the development of future proposed rulemaking.

APPENDIX

Public Assistance Alternative Procedures Pilot Program for Debris Removal
Acknowledgement
SAMPLE

In accordance with the Sandy Recovery Improvement Act of 2013, the Federal Emergency Management Agency (FEMA) is implementing alternative procedures for the Public Assistance (PA) Program through a pilot program. As a representative of the Sub-grantee, I understand the following.

1. The pilot includes the following elements for debris removal:
   - ☐ An incentive for accelerated debris removal by providing an increased federal cost share (sliding scale)
   - ☐ Sub-grantee retention of income from debris recycling without a grant offset
   - ☐ Financial incentives for a FEMA-approved debris management plan and use of at least one pre-qualified contractor
   - ☐ Reimbursement of straight time force account labor costs for debris removal

2. The pilot is voluntary, and a Sub-grantee may participate in alternative procedures for one or more sub-grants.
3. For debris removal, the Sub-grantee acknowledges applicable timelines, including the requirement to complete debris operations within six months; and that FEMA may request joint quantity evaluations and details regarding Sub-grantee operations.
4. All contracts must comply with local, State, and Federal requirements for procurement, including provisions of 44 CFR Part 13.
5. The Office of Inspector General may audit any Sub-grantee and/or sub-grant.
6. Once a sub-grant is awarded/obligated using a debris removal alternative procedure, the sub-grant cannot revert back to standard procedures.

Signature of Sub-grantee's Authorized Representative Date

Printed Name and Title

Sub-grantee Name PA ID Number

- ☐ We elect to participate in the Alternative Procedures for Debris Removal selected above.
- ☐ We elect to **not** participate in the Alternative Procedures for Debris Removal.

Debris Management Plan Review Job Aid

This job aid outlines the process the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) will use to review Debris Management Plans (Plan) submitted for consideration under the Public Assistance (PA) Alternative Procedures Pilot Program for Debris Removal (Debris Pilot). The Sandy Recovery Improvement Act of 2013 (SRIA) (P.L. 113-2) authorized FEMA to provide an incentive to State, Tribal, or local governments, or owners or operators of a private nonprofit facility to have a Plan in place and accepted by FEMA prior to the declaration of a major disaster or emergency declaration. A Plan is a written document establishing procedures and guidance for managing disaster debris in an expeditious, efficient and environmentally sound manner. Grantees and Sub-grantees may refer to the *Public Assistance Debris Management Guide* (FEMA 325) for more extensive details regarding items to consider in development of a Plan.

A. Cost Share Incentive

When a Grantee or Sub-grantee has a Plan determined acceptable by FEMA and has identified at least one or more pre-qualified contractors before the date of the disaster declaration incident period, FEMA will provide a one-time incentive of a two (2) percent increased cost share adjustment for the first 90 days of debris removal activities, beginning the first day of the declared incident period, provided the Plan is implemented for that disaster.

B. Basic Plan Elements

The content of each Plan will vary depending on State, Tribal and local ordinances, zoning, locations of area-critical infrastructure, emergency services, disposal locations, and other localized factors. However, the following 12 elements are the basic components of a comprehensive Plan:

1. **Debris Management Plan Overview.** This section of the Plan should include a discussion explaining the Plan's purpose and its overarching goals. It should also include a brief discussion about how the Plan was developed; who participated in the Plan development (effort should be made to include all internal departments and external entities that may be involved with the debris removal operations); and, whether the Plan is officially adopted by the governing body.

2. **Events and Assumptions.** Forecasting the type and quantity of debris is essential to the debris removal planning process. The Plan should identify the types and severity of disasters that are most likely to occur along with the types and anticipated quantities of debris that may be generated. It should also identify the type of handling that would be necessary to safely manage the debris. The Plan should describe the general terrain types, land use, and accessibility for the areas which would most likely be impacted by the disaster and how these characteristics may affect debris operations.

3. **Debris Collection and Removal.** A debris collection strategy establishes a systematic approach for the efficient removal of debris so that the community can recover quickly after a disaster. The clearance and collection of disaster debris should be structured to meet response and recovery priorities. As such, the Plan should identify and prioritize facilities that will be impacted by disaster debris. It should also define the priorities during both the response and recovery phase operations and describe the coordination process with other entities responsible for managing debris. The Plan should identify roles and responsibilities for all functions involved (e.g., Public Works, Finance, Solid Waste Departments, etc.). Additionally, the Plan should address the methods that will be used to remove debris (i.e., curbside collection, community drop-off bins, etc.).

4. **Temporary Debris Management Sites and Disposal Locations.** The Plan should identify locations where the disaster debris will be segregated, reduced and disposed and/or whether it will be recycled. The Plan should address traffic circulation at each of the disposal sites, disposal capacity and how debris will be managed if there is a lack of landfill capacity.

5. **Debris Removal on Private Property.** Debris removal from private property is generally the responsibility of the individual property owners; however, when it is in the public interest to remove debris, the Grantee or Sub-grantee may act to abate the threat. The Plan should identify the circumstances under which the Grantee or Sub-grantee will take such action and identify the enabling laws that allow government to intercede in private property matters. The Plan should also provide discussion on the specific steps it will undertake to obtain permissions to enter on the private property and how it will recoup costs (such as insurance proceeds) for the debris removal.

6. **Use and Procurement of Contracted Services.** The Plan should discuss the circumstances when contracted services will be required and describe the types of debris operations that will be contracted. The Plan should describe the process and procedure for acquiring competitively procured contracted services. All contracts must comply with

Federal procurement requirements (i.e., completive bidding), as outlined in Title 44 Code of Federal Regulations (CFR) §13.36; Federal requirements may be more stringent than State or local requirements (See also Recovery Fact Sheet 9580.201 *Debris Contracting Guidance*).

7. **Use of Force Account Labor.** The Plan should clearly define the types of work that will be performed by force account labor.

8. **Monitoring of Debris Operations.** Debris monitoring helps ensure that the debris removal contractors are performing the agreed upon scope of work as per the contract and helps to maintain the required documentation for FEMA PA reimbursement. The Plan should include details as to how the Grantee or Sub-grantee will monitor its debris removal contractor at pickup sites, Debris Management Sites/Temporary Debris Storage and Reduction Sites and final disposal areas. Specifically, the Plan should discuss who will perform the monitoring and describe each monitoring task.

9. **Health and Safety Requirements.** Debris operations involve the use of heavy equipment and numerous types of trucks, which can pose safety hazards to emergency workers and the public. In addition to safety hazards, exposure to certain types of debris can pose potential health risks to emergency workers and the public. The Plan should include specific details as to how workers and the public will be protected and discuss the specific measures for adherence to safety rules and procedures.

10. **Environmental Considerations and Other Regulatory Requirements.** The removal and disposal of certain types of debris can impact human health and the physical environment. Successful debris operations depend on compliance with Federal, State and local environmental laws. The Plan should identify all debris operations that may trigger compliance with environmental and historic preservation laws. It should also identify how compliance will be attained.

11. **Public Information.** The dissemination of debris removal information is critical to the effective and efficient removal of disaster debris. The Plan should include a public information strategy to ensure that residents receive accurate and timely information about the parameters, rules, and guidelines for debris removal.

12. **Identification of Debris Removal Contractors.** The Sub-grantee must identify at least one or more debris contractors that it has pre-qualified to perform debris operations. A pre-qualified contractor is one that has been identified and evaluated by a local government and has been determined to be capable to perform debris removal work (e.g.,

capabilities, bonding, insurance, availability). Identification of these qualifications should be done in conjunction with drafting the debris management plan, which should include specific contract requirements and explain how contractor qualifications are established. The purpose of having a pre-qualified contractor is to have a list of qualified contractors to compete the work. A pre-qualified contractor does not constitute a stand- by contractor. Sub-grantees must still comply with Federal procurement requirements (i.e., completive bidding), as outlined in 44 CFR §13.36.

C. Plan Submittal and FEMA Review

Sub-grantees should submit their Plan to the Grantee for initial review and coordination. The Grantee should review the Plan to validate that it meets the overall intent of establishing processes and procedures to remove debris expeditiously, efficiently and in an environmentally sound manner and provide the Sub-grantee with any necessary feedback on the content. Once the Grantee confirms that the Plan sufficiently addresses each of the elements in the *Debris Management Plan Checklist* (Plan Checklist) (attached), the Grantee should forward it to the FEMA Regional Administrator for review.

FEMA will use the Plan Checklist to ensure that the Plan addresses the 12 basic components of a comprehensive debris management plan:

- Debris management overview
- Events and assumptions
- Debris collection and removal plan
- Temporary Debris Management Sites and disposal locations
- Debris removal on private property
- Use and procurement of contracted services
- Use of force account labor
- Monitoring of debris operations
- Health and safety requirements
- Environmental considerations and other regulatory requirements
- Public information
- Identification of one or more prequalified debris removal contractors

If upon completion of review, FEMA determines that the Plan does not sufficiently address all of the Plan elements outlined above, then FEMA will provide written notification to the Grantee citing the Plan's deficiencies. The Sub-grantee may revise the Plan and resubmit it through the Grantee to FEMA for review.

When a Plan is accepted, the FEMA Regional Administrator will send an acceptance letter to the Grantee (see attached template). FEMA should provide its determination of whether the Plan is acceptable no later than 30 days from the date of receipt of the Plan. Review and acceptance of a Plan does not mean that FEMA is approving any operational component of the plan, nor does it mean that the Federal government will fund any aspect of the Plan. Eligibility of costs for debris removal and management in a declared major disaster or emergency will be determined based on established PA Program authorities, regulations, policies and guidance.

The Grantee should retain a record of the Plan and ensure the Sub-grantee receives a copy of the acceptance letter. After a major disaster or emergency declaration, the Sub-grantee must notify the Grantee whether it would like to request the one-time two (2) percent Federal cost share increase for that incident.

FEMA will track the Sub-grantees that submit a Plan for review and acceptance. This will include whether FEMA accepted the Plan and which Sub-grantees have received the two (2) percent Federal cost share incentive. Each FEMA Regional Office will maintain the spreadsheet located in the corresponding folder for that region under the Debris Management Plan folder on the FEMA Headquarters SharePoint site.

Debris Management Plan Checklist

Applicant Name | State/Territory/Tribe

Applicant Point of Contact | Contact Number

Yes	No	Plan Requirements	Comment
		Overview – Does the plan describe the purpose and objectives?	
		Events and Assumptions- Does the plan provide information on the types and anticipated quantities of debris that will be generated from various types and sizes of events?	
		Debris Collection and Removal- Does the plan have a debris collection strategy? Does the plan discuss the methods that will be used to remove debris and establish priorities for clearance and removal? Does the plan outline the roles and responsibilities of the various functions involved (Public Works, Finance, and Solid Waste Departments, etc.)?	
		Debris Disposal Locations and Debris Management Sites- Does the plan identify where the disaster debris will be segregated, reduced, and disposed or whether debris will be hauled to a recycler?	
		Debris Removal on Private Property- Does the plan address the authority and processes for private property debris removal?	
		Use and Procurement of Contracted Services- Does the plan describe the types of debris operations that will be contracted? Does the plan describe the process and procedure for acquiring competitively procured contracted services?	
		Use of Force Account Labor- Does the plan define the types of work force account labor will accomplish?	

Yes	No	Plan Requirements	Comment
		Monitoring of Debris Operations- Does the plan describe who and how debris removal contractors will be monitored at pickup sites, Debris Management Sites/Temporary Debris Storage and Reduction Sites and final disposal?	
		Health and Safety Requirements- Does the plan describe how workers and the public will be protected and discuss the specific measures for adherence to safety rules and procedures?	
		Environmental Considerations and Other Regulatory Requirements- Does the plan identify all debris operations that will trigger compliance with environmental and historic preservation laws and how compliance will be attained?	
		Public Information- Does the plan include a public information strategy to ensure that residents receive accurate and timely information about debris operations?	
		Identification of Debris Removal Contractors- Does the jurisdiction identify at least one or more debris contractors that it has prequalified?	

Debris Management Plan Acceptance Letter Template

Addressed to the Grantee

Dear [Insert Name],

This letter responds to the [your, or Name the State Office of Emergency Services …] request dated [date of correspondence] for the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) to accept the [name of jurisdiction] Debris Management Plan (Plan) for participation in the Public Assistance (PA) Alternative Procedures Pilot Program for Debris Removal. This pilot program allows a one-time two (2) percent Federal cost share increase for debris removal operations performed within 90 days from the start of the incident period of a major disaster or emergency declaration.

FEMA Region [XX] has determined that the Plan:

> Contains the basic planning elements of a Debris Management Plan along with at least one prequalified debris and wreckage removal contractor (see enclosed Debris Management Plan Checklist). Therefore, FEMA has determined the Plan is acceptable. Accordingly, the [name of jurisdiction] may receive a one-time two (2) percent Federal cost share increase as part of the PA Alternative Procedures Pilot Program for Debris Removal. Your office should notify FEMA when [name of Jurisdiction] wishes to apply the incentive to its debris removal work.
>
> Does not contain the basic planning elements as noted in the enclosed Debris Management Plan Checklist. The [name of jurisdiction] may revise its Plan and resubmit it to FEMA, through your office, for reconsideration.

Acceptance of this Plan does not mean that FEMA is approving any operational component of the plan nor does it mean that the Federal government will fund work conducted under any aspect of the Plan. Eligibility of costs for debris removal and management in a declared major disaster or emergency will be determined based on established PA Program authorities, regulations, policies and guidance. Sub-grantees must comply with Federal procurement requirements (i.e., competitive bidding), as outlined in 44 CFR
§13.36 in the procurement of debris removal services.

Should [you, or the State Office of Emergency Services] have any questions you may contact [name of FEMA personnel] at xxx-xxx-

xxxx. Sincerely,

Signed
Regional Administrator or Designee
Enclosure